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THE

GENERA OF PLANTS.

BY

RICHARD ANTHONY SALISBURY,
F.R.S., F.L.S., Sec. Hort. Soc., etc.

A FRAGMENT

CONTAINING PART OF

LIRIOGAMÆ.

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PREFACE.

Richard Anthony Salisbury, the only son of Richard Markham, a cloth-merchant in Leeds, was born in 1761; he lived for some time at Chapel Allerton in Yorkshire, and published a Catalogue of the Plants of his garden there; he subsequently sold his property in that county and came to London, and lived at 18 Queen Street, Edgeware Road, where, in a small garden not more than thirty feet square, he cultivated several hundred rare plants, each in a small pot. He married Caroline Stainforth in 1796, and had a daughter Eleanor, born on the 6th of November 1797, who married Major Brice, of Bath. His married life was not a happy one. In January and March 1829 he had two paralytic attacks, and he died in London about the middle of March in that year. In a letter in my possession, he states that "in the year 1780 I first became acquainted with Mrs. Anna Salisbury, a very old maiden lady, who in 1785 gave me £10,000 three per cents, to pursue my studies in botany and gardening, on condition of my taking the name of Salisbury only, out of respect to the memory of her brother John Salisbury of Exeter deceased." In the same letter he observes, "I have for many years in vain sought a relation of my maternal grandmother, whose name was Salisbury with an *i*, not Salusbury with an *u*;" and in another letter he says, "Mrs. Anna Salisbury was a connexion of my maternal grandmother, who was Hester Salisbury of Wales;" and he proceeds, "my heir at law is immensely rich, so I follow Mrs. Anna Salisbury's plan in some respects."

"My mother descended from Jonathan Laycock, of Shaw Hill, who married Mary Lyte, sister of Squire Lyte of Lytes Carey, who translated Dodoens' 'Herball' into English; so I inherit a taste for botany from very ancient blood."

Mr. Salisbury was a Fellow of the Royal and Linnean Societies, and for several years Secretary to the Horticultural Society. He wrote several botanical works, and paid particular attention to the plants of the garden; but the great desire of his life was to make a revision of the natural orders, and to publish a "*Genera Plantarum.*" For this purpose he examined all the plants that he could procure, either in the fresh state or in Herbaria; and of each he prepared an elaborate description, written in a very small neat hand, embellished with most accurate and minute figures of all the most important organs; and carefully put aside in a cabinet the remains of the specimens for further research or reexamination if necessary.

M. A. P. Decandolle describes Mr. Salisbury thus. "C'était un homme d'esprit vif et d'une pétulance extraordinaire, qui, par le physique et le moral, ressemblait plus à un Languedocien qu'à un Anglais." I knew little of him except in the Banksian Library; but his correspondence shows that he was a warmhearted, kind, and liberal friend.

In 1819 when studying botany in the library of Sir Joseph Banks, it was my good fortune to make acquaintance, amongst other scientific men, with the following botanists, viz. M. A. P. Decandolle, M. Dunal, Messrs. Robert Brown, R. A. Salisbury, A. B. Lambert, Dawson Turner, L. W. Dillwyn, A. Menzies, James Dickson and Dr. John Richardson. They were all most kind to me, who was only a lad, and I had the happiness of retaining their friendship until their deaths.

Mr. R. A. Salisbury showed me several of his Monographs, and kindly lent me some of his MSS. to assist me in preparing the 'Natural Arrangement of British Plants;' and shortly afterwards he wrote to me stating that, if I would devote myself to Botany and undertake to edit any MSS. that he might leave unprinted at his death, he would leave me his library and his fortune. This offer I at once declined, as I did not wish to bind my future course in life. From M. Decandolle's 'Autobiography' p. 268, we learn that Mr. Salisbury had previously made the same offer to him, with the additional condition that he should assume the name of Salisbury; and I understand that he made a somewhat similar offer to another botanist; but none of these plans were carried out. *

Mr. Salisbury became acquainted with Mr. Burchell (the florist

of Fulham) and his family; and the acquaintance ripened into great friendship; and on the death of Mr. Salisbury, in 1829, the son (Dr. W. J. Burchell) inherited part of his property, and with it some (I doubt if all) of his MSS.

Knowing that Dr. Burchell had these MSS., I several times requested him to let me have some or all of them, or, at any rate, leave them to me at his death, as I was very desirous of carrying out at least a part of the desires of my kind and early friend.

Dr. Burchell died in 1864; and his extensive zoological and botanical collections, made in Africa and Brazil, were offered to the University of Oxford on certain conditions, and not accepted. The botanical collections were then given by his surviving sister to Sir William Hooker for the Kew Herbarium, and his zoological collections, containing a very large series of insects, were presented to the University of Oxford.

Hearing that Dr. Burchell's collections had been thus distributed, I called on Miss Burchell to inquire what had become of Mr. Salisbury's MSS. She stated that she had them all safe, but that she intended to burn them the next day, as she was determined that they should not be in any way mixed up with her brother's collections. At my urgent request, she most kindly gave them to me, on my pledging myself that they should not be placed along with her brother's collections.

These documents consisted of:—

1. A large quantity of descriptions of genera, all written in pencil and on one-sized paper (like the Solander MSS.), all illustrated by pencil drawings of the more important parts of the plants described in the MSS.

2. A cabinet of seeds and fragments of plants, evidently the specimens described in the MSS.

3. A series of fragments of the 'Genera Plantarum,' written in a most beautiful manner. Several parts of this MS. had been copied, with slight alterations, three or four times over. It was this overcare in the preparation that prevented any part of this work from appearing.

4. Some separate papers on the structure of *Coniferæ*, and a monograph of the genus *Crocus*, and other similar works in a more or less complete state.

5. A few letters and drafts of letters from and to botanists and others. It is from these that the foregoing notes have been extracted.

The MSS. were all in a most confused and dirty state, as if they had been gathered up at his death and put into the box in which I received them.

I have given the specimens, together with the drawings mounted and bound in six large volumes, to the British Museum, and I intend that the MSS. shall follow as soon as I can get them into some kind of order.

I have here printed one fragment of the 'Genera Plantarum' exactly as it was left by the author, for the purpose of showing the kind of work that he intended to produce; and I have chosen this portion because it is one that he seems to have taken much pains with. There are no less than three copies, or rather editions, of it, written in his very neat hand.

In order to secure the exact impression of the MS., I desired that no proof-sheets should be sent to me, but that the whole work of revision should be limited to securing a faithful reproduction of the MS. in the state in which it was left by the author. I now find, on looking over the complete impression, that there are a few bitter personal expressions which perhaps it might have been desirable to expunge; but as so many years have elapsed, and the writers attacked can no longer be hurt by their appearance, there seems no sufficient reason for mutilating the MS. by their exclusion. I scarcely need to say that on these points I have no feelings in common with the author.

JOHN EDWARD GRAY.

British Museum,
March 1, 1866.

GENERA PLANTARUM.

Gens 3. Pleurothallæ.

Monocotyledones, J. *Endorhizæ*, Rich. *Endogenæ*, De Cand.

The characters hitherto selected to distinguish *Dicotyledones* and *Monocotyledones* are well known, and need no recapitulation here. Most of them are liable to exceptions; of that, however, proposed by Desfontaines, from the structure of their stems, I have only found one in *Dicotyledones*, namely *Zamia*, which has no concentric circles; but they are more numerous among *Monocotyledones*, occurring in *Cordyline*, *Dracæna*, *Pleomele*, *Aloe*, and *Yucca*, the stems of all which are increased in diameter, by woody fibres added to their circumference, though none of them have medullary rays converging towards the centre; so far therefore the discovery of a character in their organs of vegetation remains to Desfontaines, and the necessity of admitting these to have some influence, even in generic combinations, is confirmed. The lateral evolution of the Plumula in *Monocotyledones* during germination, appears to me by far the most constant difference of all; few persons have raised so many from seeds, and not having met with any real exception to it, I call them *Pleurothallæ*. Their Cotyledon likewise is always single, and the second leaf of their Plumula has never yet been found exactly in the same horizontal line as the first; even in *Asparagus*, where they are so close as to embrace one another, the second is carried up higher when the stem shoots out, as Mirbel faithfully shows in the Annales du Muséum. With respect to the nature of the floral envelopes in *Monocotyledones*, I cannot think with many botanists of the present day, that they are invariably calycine; for in colour, insertion, figure, proportion, substance, and even sometimes number, they closely resemble those of *Dicotyledones*, varying at the same time exactly in the same manner, with respect to one another. Nor is my difference of opinion a paltry squabble about names; it involves several physiological facts, and plain analogies regarded by me as mathematical truths, in forming the present series of vegetables. Dryander, not only when this wild theory of Adanson's was more extensively promulgated by A. L. de Jussieu in 1789, but during the whole of his life, thought it quite absurd, and tacitly contradicted it, as he always said that he would, under many generic characters in the second edition of Hortus Kewensis. *Crocus*,

Diasia, Arrizozanthus, Xanthorhea, and *Dianella,* are instances in *Monocotyledones,* where he has substituted "*petalis*" for the commodious "*perianthiis*" of *Mr.* R. BROWN. The last mentioned Botanist indeed professed to believe in this vegetable transubstantiation, though he differs with A. L. DE JUSSIEU, concerning the mode in which the miracle is performed, renouncing that celebrated *Frenchman's* supposed origin of the floral Envelope. He says in the preface to his 'Prodromus,' p. vi. "*doctrina de indole calycinâ (minime de origine) integumenti floralis Monocotyledonum &c., analogiæ magis consentanea mihi videtur; Perianthium autem in familiis integumento florali simplice instructis pro calyce substitui;*" but afterwards in p. 352 when falsely accusing me of not adhering to my own definitions on this head, forgets that under *Scitamineæ* p. 305, he had himself really fallen into that error; for notwithstanding they have two floral Envelopes of as different a nature, if we are to credit the usual evidence of our senses, as any in *Dicotyledones,* he calls both a Perianthium, which to adopt DRYANDER'S emphatical words respecting the passage, "*is inconsistency with a vengeance.*" As for analogy, *Hyacinthus, Amaryllis, Narcissus, Hemerocallis, Polianthes, Convallaria, Erythronium, Lilium, Tulipa, Colchicum, Crocus, Gladiolus, Tigridia,* and *Iris,* all prove that to be in favour of my side of this question; and to deny both a calycine and petaloid floral Envelope in *Scitamineæ,* or *Fluviales,* is surely not less paradoxical, than it would be to deny them in *Œnothereæ* or *Ranunculeæ*; but I turn with delight from *Mr.* R. BROWN'S ambiguous sophisms to record a few interesting facts on the subject. The chief argument by which the venerable A. L. DE JUSSIEU, &c., support his opinion, namely the absence of an inner Bark in *Monocotyledones,* is completely subverted by several genera already mentioned, in the stems of which an inner Bark is just as evident as in *Dicotyledones.* The inner Bark moreover of all vegetables differs in nothing whatever from the outer, as may be seen in some *Coniferæ,* especially *Pinus Pinaster,* its successive layers in that species adhering together for many years, and still more beautifully in *Tamus Elephantipes* of L'HÉRITIER and many *Monocotyledones.* PETIT THOUARS has long ago justly stated, that the inner Bark is never converted into wood, and I do not know a single proof, that the Corolla is an elongation of it exclusively. On the contrary, several deviations from the usual course of nature warrant me in believing, that the Calyx, Corolla, Stamina, and Pistillum, are all an elongation of the outer Bark. The first is in *Primula,* which affords numerous instances, but the most curious and decisive is a variety of *elatior,* our common *Cowslip,* which is brought in abundance every spring to *Covent Garden* market, with a Calyx so exactly like the Corolla in colour, figure, and perfume, that they cannot be distinguished. I have seen a second in *Rosa Canina,* where the leaflets of the Calyx were flesh-coloured and petaloid in their disc, but green and calycine at their margin. A third singular instance occurred in *Cheiranthus Cheiri,* the Calyx of which was petaloid at the top with perfect polliniferous Anthers

upon those two leaflets, opposite to which the shorter Filaments ought to have been placed. That a continuity of the outer Bark and floral Envelope will not always determine the nature of the latter, is also evinced by aberrations directly contrary to those just mentioned. First in *Viola Odorata*, all the Petals are sometimes green and calycine, particularly when it flowers in autumn, after a very hot and dry summer. Secondly in the order of *Ericeæ*, the first time a Plant blossoms, its Corolla is frequently more or less like the Calyx; and DRYANDER showed me one of those with a long tube, in which nevertheless the segments of its Limb had a green dorsal furrow like the Leaves. Thirdly, in an early Flower of *Ficaria*, all its Petals were short, herbaceous and somewhat inflated, without any tint of yellow or Glossiness on their inner surface. Fourthly, in a Flower of *Magnolia Grandiflora* produced on a young Plant raised from seed at *Mill Hill*, the Petals were nearly of the same green colour and hard consistence as the Leaves, those of the innermost series only being whitish towards the top, and entirely without smell; yet its Stamina and Pistilla were perfect with two Ova in each of the latter. These and a great many other anomalies, joined to the natural floral Envelopes of *Polygonum, Begonia, Cucumis, Galium, Viscum, Fuchsia, Passiflora, Tropæolum, Caltha, Anemone, Nymphæa, Euryale, Hydropeltis, Ruscus, Trillium, Pavis, Convallaria, Smilax, Veratrum, Narthecium, Bromelia, Merea, Cottus, Xyris,* and *Sagittaria*, induce me to believe, that a Calyx and Corolla, one sometimes passing insensibly into the other, or quite distinct, are exactly of the same nature and have a common origin in *Dicotyledones* and *Monocotyledones*; either of these floral Envelopes likewise may be supprest in both these great Divisions. A very useful practical character of them is, that among the former numerus 5-narius or its multiples, but among the latter numerus 3-narius or its multiples generally prevails. DESFONTAINES' character of *Monocotyledones*, taken from new fibres being only added to the centre of their Stems, is not strictly speaking an universal law, even in *Palmæ*, one of which if not more has a hollow stem. That acute and profound Botanist DE CANDOLLE, has with strict consistency called the floral Envelopes of both *Dicotyledones* and *Monocotyledones*, a Perigonium, except some in my extensive Tribe of *Achyrogamæ*, which he says have no Perigonium at all. Whether their floral Envelopes only deserve the appellation of Bractes, I must consider hereafter; in the mean while, if any unprejudiced student of our lovely science, will read DE CANDOLLE's just observations, in the second edition of his 'Théorie Elémentaire,' relative to monopetalous and polypetalous Flowers, as well as TURPIN's sound remarks in the third volume of 'Annales du Muséum' on the folly of giving different names to one and the same Organ; and will then compare Flowers of *Canna* with those of *Justicia*, or of *Alisma* with those of *Ranunculus*, he cannot hesitate I think to allow, that a Calyx and Corolla, strictly analogous in every point; occurs both in *Monocotyledones* and *Dicotyledones*.

Trib. 1. LIRIOGAMÆ.

This Tribe contains those *Monocotyledonous* Vegetables, in which the floral Envelope, though often green and small, is never of a truly glumaceous or chaffy texture. In several Genera, its three outer parts are calycine and not staminiferous, while its three inner parts are petaloid and staminiferous. In others, the Stamina are inserted in the Receptacle, quite detached from the floral Envelope, and this even when the Pericarpium is inferum, *Galanthus* for instance. In some, the entire base under the divisions of the floral Envelope, which appears to connect them, may possibly be a Receptacle, such as occurs in various *Dicotyledones*; but if the full number of 6 or more Stamina are inserted higher up in the floral Envelope, like those of *Narcissus, Gethyllis, Curculigo, Massonia, Hyacinthus, Cyrtanthus, Polianthes, Sanseveria, Polygonatum, Ixia, Gladiolus*, and *Strelitzia*, that character always induces me to call the whole floral Envelope a Corolla, as I was taught by DRYANDER, long before the present possessor of his chair in *Soho Square* began to preach a different doctrine there; and I have already had occasion to observe, that A. L. DE JUSSIEU repeatedly acknowledges its importance, saying among other parts of his work in the preface p. 48, "*maxima Corollæ affinitas cum staminibus, quorum vera est appendix.*"

Clas. 1. SPADICIFERÆ.

No two Classes of *Dicotyledonous* and *Monocotyledonous* Vegetables yet discovered, are in my judgment so nearly allied to one another, as *Cucculliferæ* and *Spadiciferæ*, the partial floral Envelope of the former, being very analogous to the common spathaceous Bracte performing the same functions in many of the latter. Both these parts are often anomalous in shape; often coloured internally with the same dark lurid tint, or snake-like spots; often bearded with long hairs, which impede the progress of Insects attempting to creep down, or entrap them never to return; and both often exhale a fœtid cadaverous smell. In a rich Border at *Mill Hill*, that of *Arum Muscivorum* measured twenty-two inches in length; and HUMBOLDT records one of an *Aristolochia* large enough to make children's Hats. The similarity of Foliage in the two Classes moreover is striking. I do not yet know any exclusive definition of *Spadiciferæ*, and they will I trust be illustrated by RICHARD, who has examined and made drawings of many species; for unfortunately the "*Cotyledon teres, rimâ brevi longitudinali Radiculæ approximatâ*" stated by *Mr.* R. BROWN to exist in the Embryo of all their Seeds, not only occurs in a vast many other *Monocotyledones*, but the structure of that part differs here even in Genera of the same Order. *Richardia* for instance, so nearly akin to *Calla*, has a Cotyledon somewhat compressed, and quite a different aperture wedge-shaped, forming a scale exactly like that of *Dioscorea*, which I regard as an approach to a second Cotyledon; this longitudinal Chink also is so minute, that if constant or exclusive, it would not be of much practical utility. His other

diagnostic of "*Plumula 2-3-phylla foliolo exteriore plus minus denudato*" is equally uncertain: in *Arum Maculatum* and *Arum Dracontium*, no part of it is seen or denudated till after germination, as I can say from repeated dissections of their Seeds during many weeks. Two characters, however, are very obvious in all the Seeds I have examined, namely a yellow or brown coat, and Embryo placed in the axis of their Albumen, even when remote from the Hilum. The Roots of many *Spadiciferæ* are tuberous, and some few after their adstringent juice is destroyed by roasting or boiling, afford wholesome food in such abundance, as to be cultivated for that purpose. The Stems of many climb, either by fibrous Roots sent out under their Leaves, or more rarely by Cirrhi. Their Leaves differ exceedingly even in the same Order, putting on an appearance of *Polypodeæ*, *Hedereæ*, *Irideæ*, *Cypereæ*, or even *Bromeleæ*, that it might à priori have been guessed many of them had originated in *New Holland*, which is so famous for the deceptive foliage of its Vegetables. Their Flowers are frequently 1-sexual, with or without any floral Envelope except a common Spatha, the males and females being occasionally separated by bristly Appendages, in a close or loose Spike, the rachis of which is often elongated beyond them into a tail or thick Club; and if they have any Pedicels, these are never articulated. An ingenious young botanist, *Mr.* C. KUNTH, has published some interesting facts relative to *Spadiciferæ* in the second volume of Mémoires du Muséum; but the most learned men sometimes err, and a theory of RICHARD's there adopted, that each division of their partial floral Envelope consists of so many distinct monandrous Flowers surrounding a single female, appears to me very improbable; for the only argument by which he supports it, that they derive their origin from "*la substance du spadice même*," might be adduced to deny the existence of any sessile hermaphrodite Flower whatever.

Ord. 1. CALADEÆ. Aroideæ *sect.* 1. R. BR.

Stenurus. Pericarpia albida, hyalina, 1-sperma. Antheræ transversim dehiscentes, postea 2-labiatæ. Arum Tenuifolium L. *Folia simplicia, lineari-lanceolata,* Scorzoneræ.

Arisarum T.
Arum J. L.
Caladium VENT.
Serangium W. WOOD. Dracontium Pertusum L.
Calla J. L.
Richardia KUNT. Calla Æthiopica L.

Caladeæ have 1st a common spathaceous Bracte at the base of their Flowers; internally often coloured and more or less variegated, as well as bearded: 2ndly no partial floral Envelopes: 3rdly their male and female Organs are generally in two clusters of separate Sexes, with or without bristly Appendages intervening, upon a Peduncle commonly pretty thick, which they entirely or partly cover within the Spatha, and being there coloured and fleshy, I feel in-

clined to call it a Spadix with Linné, though as De Candolle truly observes it is merely a spiked Inflorescence: 4thly their Pericarpium is fleshy, never splitting into valves, 1-locular as I suspect by the suppression of two placental dissepiments, for in one Fruit of *Arum Dracontium* I found an additional row of Seeds and its Stigma was 2-lobed; in all I have dissected it is solid from above the middle or at the top while unfœcundated, as in *Pandaneæ*, and from analogy superum: 5thly, their Seeds are sometimes erect and pendulous in the same Pericarpium, with the Radicle of their Embryo turned towards the Hilum, or from it at the opposite extremity. The Order is yet almost a virgin field to labour in, and hereafter will no doubt be separated into more Genera. *Arum Tenuifolium* L. is one, distinguished by the following characters: Flowers appearing before the Leaves which are linear-lanceolate; Peduncle surrounded with 3 or 4 wedge-shaped stipules, remaining underground till the Fruit is ripe; Spatha from 6 to 9 inches long, dark purple, unfolding almost to the bottom, gradually attenuated, margins undulated below the middle, inner surface velvety; Spadix dark purple, longer than the Spatha, slender, gradually attenuated into a fine Tail, round and smooth; Berries glomerated at the base, hypogæous till nearly ripe, when they turn white as L'Ecluse faithfully describes, fleshy but finally somewhat transparent; Appendages pale ochre-colour, awl-shaped, scattered over about an inch of the Spadix between the male and female Flowers, as well as for a short space above the latter, in one specimen evidently formed of imperfect Ovaries; Anthers clustered, 4-angular, 2-locular, splitting transversely and afterwards 2-labiated; Seeds solitary, inserted in the centre of the bottom of the Berry, nearly filling its whole cavity and obovate, their Coat fulvous; Albumen and Embryo like that of *Arum Maculatum*, with a Radicle at the opposite extremity to the Hilum. Another Genus, which used to ripen Fruit at *Chapel Allerton* is *Dracontium Pertusum* L. and it belongs to this Order, differing from *Calla* in having a buff-coloured Spatha so convolute as to hide the Spadix, which is blunt and entirely covered with Flowers, those at the bottom females, the rest according to my view of them hermaphrodite, but the number of Filaments generally corresponds with the angles of the Pericarpium, varying from 3 to 6, and they are broadly wedge-shaped; Anthers 2-locular, to the best of my recollection splitting longitudinally; but after my friend the *Rev.* W. Wood, F.L.S. undertook to describe *Caladeæ*, I neglected them; he called this Genus *Serangium* from the gaps of its Leaves, and meant to have published its character in Rees' Encyclopædia, the botanical part of which he wrote till his death, when *Sir* J. E. Smith, who had virulently abused Lamarck for engaging in a similar work, succeeded him; "*thus even handed justice commends th' ingredients of the poisoned chalice to our lips.*" A sensible increase of heat, is said to be indicated by a thermometer, put down into the Spatha of certain *Caladeæ*, when that organ is in full vigour, but I have had no opportunity of verifying or refuting this myself.

Ord. 2. DRACONTEÆ. Aroideæ *sect.* 2. R. BR.

Symplocarpus. HORT. TR. Dracontium Fœtidum L.
Dracontium. J. L.
Pothos. J. L.
Orontium. J. L. NUTT.
Acorus. J.L.
Gymnostachys. R. BR.

Draconteæ have a partial Envelope to each Flower, which is hermaphrodite. Here the Spatha is often small, or not different from a common Bracte, and numerus 4-narius frequent: in their female Organs they agree nearly with *Caladeæ*, but the Seeds of some are without Albumen. In HUMBOLDT's work *Dracontium Fœtidum* L. is referred by KUNTH to *Calla* on the authority of RICHARD, and by some mistake he adds that of *Mr.* R. BROWN, for the latter says expressly in his Prodomus, "*proprii Generis esse videtur.*" This Plant was very luxuriant in PETER COLLINSON's field at *Mill Hill*, he having judiciously planted it at the edge of the Pond, where I examined and called it *Symplocarpus* on account of its monospermous Ovaria immersed in the Receptacle exactly as in *Anana*, and the germination of its Seeds is fully detailed in NUTTAL's useful work. The Habit and aromatic juice of *Acorus*, similar in both the *Chinese* and *Europæan* Species, would lead me to separate them in an Order of their own, but I have never seen their Seeds, which are said to be seldom perfected, though the latter is unquestionably indigenous in *Great Britain*; their Embryo however according to *Mr.* R. BROWN agrees with that of others in this Order, and the Leaf beyond their Spadix may be considered analogous to a Spatha. *Gymnostachys* is a *New Holland* Genus, with Leaves more like those of *Calamariæ* than *Gramineæ*, being very rough at their margins and keel; it may therefore perhaps connect *Pandaneæ*.

Ord. 3. PISTIEÆ. RICH.

Pistia. J. L.
Ambrosinia. J. L. BUTT.

Of these Genera, which are distinguished from *Caladeæ* by their capsular Fruits, I know nothing more than what is published by the writers above quoted; inserting both Orders first on account of the similarity in their Spatha to the floral Envelope of *Aristolocheæ*. ADANSON, whose merits *Sir* J. E. SMITH in the supplement to REES' Encyclopædia, still attempts in vain to depreciate, long ago perceived this affinity.

Ord. 4. LEMNADEÆ.

Ord. 5. TYPHEÆ. J. Aroideæ *sect.* 3. R. BR.

Sparganium. J. L.
Typha. J. L.

Typheæ differ from the other Orders of *Spadiciferæ* in having unisexual Flowers, the males of which are 3-androus, and one pendulous

albuminous Seed in each Pericarpium. The similitude of Inflorescence in *Pandanus* and *Sparganium* has not escaped the observation of A. L. DE JUSSIEU: indeed I can find no difference whatever in their Fruits, except that the Seeds of the latter are inserted at the top of the cell, and their Embryo has Radicula supera with a small Umbilicus near it, from which the Plumula issues, in farinaceous instead of oily Albumen; nor is it at all uncommon in *Sparganium* for two Fruits to coalesce like those of *Pandaneæ*, some species of which also have simple Fruits. Mr. Gray has separated *Sparganium Natum* L. under Dodoen's name of *Platymeria*; but as its Stigma is 4-lateral and habit similar to that of the other species, I dare not yet follow him. *Typha* I am little acquainted with, and from its Habit should be glad to remove it.

Ord. 6. PANDANEÆ. DRYAND. MS. R. BR.

Jezabel. BANKS.
Pandanus. J. L.

On consulting DRYANDER in 1794, when I lived at *Chapel Allerton*, about the affinity of *Pandanus*, he wrote upon the ticket of a small male branch of Flowers enclosed in his letter, "*Aroideis J. nunc pariter spinulosis affine Genus*; *sed ob Filamenta nuda racemosa, Antheras longas, et Pericarpia stupea in phalanges sæpe coalita, sui Ordinis.*" LINNÉ himself had not a happier talent of saying much in few words than this his pupil, half of whose time was occupied in giving information to the botanists frequenting *Sir* JOSEPH BANKS' library; yet how seldom is his name now mentioned. *Major* RENNEL indeed, in more respects than one his counterpart, has greatly honoured him, nor have AITON, KER or SIMS, omitted to express their gratitude for his assistance, but *Sir* J. E. SMITH, who was under greater obligations to him than any of us, has lately in a supplementary part of REES' Encyclopædia, made an invidious comparison between him and SOLANDER, which must not go down to posterity uncontradicted. SOLANDER'S manuscript determinations of Genera and Species, some of which have been published in the first edition of Hortus Kewensis, are the only evidence by which either of us can give our verdict respecting his abilities, for he died in 1782; but great as they unquestionably were, and putting all DRYANDER'S verbal communications out of the question, the latter has left abundant proofs, often on the very same papers, of being a superior botanist: moreover, in the strictest regard for truth, justice, and honourable independence, he was rarely equalled, never surpassed. A deal of information concerning *Pandaneæ* which *Mr.* R. BROWN does not quote either in his Prodromus or subsequent works, will be found in ROXBURGH'S Plants of *Coromandel*, as well as in JACQUIN'S Fragmenta: and PETIT THOUARS in the first volume of Journal de Botanique distinguishes as many as 16 species, saying that he thinks they are related to *Palmæ*. I place them here nevertheless, having occasionally found more than one Seed in each cell, and they agree with many *Spadiciferæ* in another character, unnoticed by *Mr.* R.

BROWN, namely, the solid mass of Pericarpium through which the Chorda Pistillaris passes before it reaches the Cell. When I mentioned this to DRYANDER, he immediately went to the collection of Fruits, and brought down a Strobilus labelled *Zamia Caffra*, but which probably belonged to *Obeliza*, pointing out a very analogous structure in the Fruits of that Genus; in fact, it was almost impossible to converse with him on any branch of Botany, without gaining knowledge. A species of *Pandanus* at *Sierra Leone* is called the *Self burning* Tree, from the facility with which it catches fire, and this property confirms the affinity of the Order to *Spadiciferæ*; for a dry stem of *Arum Seguinum* L. thrown out of my Stove to make room for a better Plant, and hung up in the Back Shed, was accidentally found to burn like Touchwood. *Jezabel* is a Genus discovered and so named from its locality, by *Sir* JOSEPH BANKS, with the habit of *Pandanus*, but differs in having succulent Fruits and many small striated Seeds in each cell; it therefore more immediately approaches to *Draconteæ*, and it is greatly to be lamented that *Mr.* FERDINAND BAUER has not yet been enabled to publish the figures which he made of this interesting Tree in *Norfolk* Island.

Ord. 7. BALANOPHOREÆ.

Ord. 8. PLATYMETREÆ.

Titragyne. Orontium Japonicum. THUNB.
Platymetra. NORONH. Tupistia REV. *in Bot. Mag. No.* 1655.
Porpax. E. *China.*

A small Order, distinguished by its perennial Rootstock, which is in fact a subterraneous Stem; Leaves sessile or petiolated, convolute while young, Flowers spiked or solitary; one or more Bractes to each; Corolla monopetalous in the usual sense of that term, its divisions valved or imbricated before they expand; Stamina inserted in the Corolla; and a 3–4-locular Pericarpium, containing one or two erect Seeds inserted at the bottom of each Cell. *Titragyne* is so named from its perforated Stigma: this Plant is still confounded in the gardens about our metropolis with *Orontium*, but differs essentially in having 3-locular Berries, and Anthers on wedge-shaped Filaments dilated and confluent at their bottom into a lobe between each; its Fruits, which used formerly to ripen in *Sir* JOSEPH BANKS' smaller *Cranberry* bed at *Spring Grove*, round the *Chama Gigas*, through which the water runs, are of an orange colour, and when bruised, stink like those of *Ilex Aquifolium* L. I am indebted to the *Marquis* D'APARTADO, a *Mexican* nobleman, for a fine specimen of *Platymetra*, as well as several more rare Plants, which were collected by NORONHA, and that botanist's name for this Genus is every way preferable to the barbarous one of *Tupistia*: it has a thick spike of Flowers like *Titragyne*, the lower ones often 8-androus as in that, but its Anthers are sessile near the middle of the Corolla, and have a broad Rachis with oblique Cells; there is no foundation for *Mr.* R. BROWN's suspicion that it is a dioicous Genus, the Seeds which are 2 in each cell, having ripened in *Dowager Lady* DE CLIFFORD's stove at *Paddington*. The country where *Porpax* grows wild,

though not yet exactly ascertained is probably *China*; it was introduced by the late THOMAS EVANS *Esq.* of *Stepney*, who sent the specimen here figured to *Mr.* HOOKER, that it might be published in Paradisus Londinensis, not long before he gave up that work to be more profitably employed by the Horticultural Society of London. The Leaves are radical, 2 or 3 in each Head, and forming in time a large close Tuft, petiolated, lanceolate with a finely crenulated margin. Flowers dull purple, solitary, cernuous, appearing with the young Leaves in our Stoves about *May*; and their Peduncle hardly rising above the surface of the earth, they look somewhat like those of *Asarum*; Corolla divided half way down into 8 equal converging wedge-shaped segments, valved before they expand; its Nerves are 16, but those under the interstices dividing into 2 branches before they reach the top, each segment becomes 3-nerved as in *Portlandia* among *Dicotyledones*; Anthers sessile, but with perpendicular parallel Cells and a narrower Rachis than in *Platymetra*; Pistillum very singular, apparently consisting of a Style gradually dilated into a large convex Stigma resembling a Button, πορπαξ, which is so large as to close the orifice of the Corolla and I believe pollinisugens at the margin; the base of the apparent Style nevertheless is a Pericarpium with 4 cells and as many Seeds, which I have not yet seen ripe; but in a decayed Flower it had already swelled to twice the diameter of the Style immediately above it.

Ord. 9. TACCEÆ.

Tacca. J. L. FONT.

Here I insulate a Genus, which by its Radication, Pericarpium nearly quite inferum and monopetalous Corolla, in my opinion connects the preceding Orders of this Class with *Dioscorideæ*, differing quite sufficiently in the cucullated Appendages behind its Anthers, to claim the rank of one itself. Some affinity in it to *Aristolocheæ* has been suggested by *Mr.* R. BROWN, but the Stamina are epipetalous in a single series, and the Stigma approaches closely to that of *Porpax*. DRYANDER always said that *Tacca* on account of its Foliage would prove 1-cotyledonous, before PETIT THOUARS made us acquainted with the germination of its Seeds; and one species has simple Leaves like those of some *Caladeæ* to which ADANSON joined it in his day.

Ord. 10. DIOSCORIDEÆ. DRYAND. R. BR.

Pericarpium inferum, 3-loculare, membranaceum et 3-valve, aut carnosum et indehiscens, disco apicis calloso melliferum. Petala 6, variè coalita, margine sæpe scariosa, alterna nunc minutissima, marcescentia. Filamenta 6, basi petalorum inserta, marcescentia; rarius nulla. Antheræ introrsum dehiscentes, nunc tantum 3. Stylus 1, vel 3 plus minus coaliti. Stigmata obtusa vel 2-furca. Semina 2 in singulis loculis, fulva badiave, margine septorum sessilia, dum juniora pendula, compressa vel lenticularia, nunc alata; Albumen cartilagineum, plerumque rimâ intus usque ad marginem vacuum

in quâ Embryo ; Cotyledon in multis lata foliacea ; Plumula conica ; Radicula Hilo proxima. *Frutices Herbæve, plerique inter Tropicos. Radix tuberosa, sæpe informis. Caulis solubilis nunc aculeatus. Folia alterna, rarius 2-5-na, in cunis imbricata lateribus post primum separantur involutis, petiolata, simplicia vel decomposita : Lamina sæpe cordata, acuminulata, nunc per nervos subtus aculeata. Stipulæ Cirrhive 2 ad basin petioli in quibusdam. Flores hermaphroditi polygami dioicive, colore variis. Spicæ Racemive axillares, femineæ plerumque simpliciores. Pedicelli si adsint non articulati. Bracteæ* 1–2 *ad singulos flores.*

Sect. 1. Pericarpium carnosum, indehiscens.

Oncus. LOUR. Petala in Infundibulum coalita, superne reflexa, extus pilosa. Filamenta 6, brevissima. Antheræ subrotundæ. Styli vix coaliti. Stigmata reflexa, 2-furca. Semina subrotunda. *Frutex in* Cochin, *sylvis. Radix informis. Caulis scandens absque cirrhis, teres, inermis. Folia alterna, cordata. Flores hermaphroditi, sessiles. Spicæ longæ, tenues, in ultimis axillis. Bracteæ 2, petala amplectentes. Species* 1. O. Esculentus LOUR.

Tamus. J. L. PLIN. Petala in cyathum coalita, superne recurva, interiora latiora. Filamenta 6, brevia. Antheræ subrotundæ. Styli coaliti. Stigmata reflexa, 2-furca. Semina lenticularia. *Herbæ per* Europam *et* Asiam *occidentalem temperatiorem,* 7–18-*pedales. Radix oblonga. Caulis herbaceus, volubilis, teres. Stipulæ* 2, *cuneatæ, reflexæ. Folia alterna, cordata vel hastata. Flores virides, dioici. Spicæ masculæ plus minus ramosæ, femineæ simplices et sensim breviores donec* 1-*floræ. Pedicelli breves. Bracteæ* 1–2, *pedicellis sparsæ. Species* 2. T. Communis L. Cretica T. *Aubris congener, Planta in Ins.* Canariensibus *a* MASSON *detecta, stipulis nullis, floribusque masculis atropurpureis calathiformibus abludens, in Racemis valde decompositis.*?

Sect. 2. Pericarpium membranaceum ; lobis 2 brevissimis, sterilibus.

Rajania. J. L. PLUM. Petala in cyathum coalita, interiora angustiora. Filamenta 6, alterna longiora. Antheræ subrotundæ, lobis fere discretis didymæ. Styli brevissime coaliti. Stigmata retusa. Semina compressa. *Frutices in Ins.* Nipon *et* Americâ *æquinoctiali,* 20–30-*pedales. Radix informis. Caulis gracilis, volubilis. Folia simplicia vel decomposita, nunc* 5–6-*nata. Flores polygami dioicique. Spicæ longæ, pendulæ. Pedicelli brevissimi. Bracteæ* 1-*riæ. Species* 10, *vel plures.* R. Hastata, Cordata, Quinquefolia L. Hexaphylla THUNB. Ovata, Angustifolia Sw. Lobata LAM. &c. *An omnes vere congeneres* ?

Sect. 3. Pericarpium membranaceum ; lobis omnibus fertilibus.

Hamatris. Petala exteriora minutissima, imbricata ; interiora ovato-cuneata, in cunis valvata ; omnia brevissime coalita. Filamenta 6 brevissima. Antheræ subrotundæ, retusæ. Styli discreti. Stigmata partita, stellata. Semina apice alata. *Herbæ in Ins.* Java, Sumatra 30-*pedales. Radix mole* Capitis. *Caules annui, teretes,*

aculeati. Folia alterna, 3-nata. Flores dioici, utriusque sexus sessiles. Spicæ racemosæ. Bracteæ 1-riæ. ἅμα simul τρεις tres, ob structuram florum. Species 2. Dioscorea Triphylla L. *aliaque inedita.*

Merione. Petala brevissime coalita, patentissima, elliptica, obtusa, interiora paulo majora. Filamenta 6, apice fissa. Antheræ lobis penitus discretis. Styli distincti. Stigmata obtusa. Semina undique alata. *Herbæ ab* East Florida *ad* Canada, 7–10-*pedales. Radix gracilis, in crura divisa fere* Anemonis Nemorosæ L. *Caules annui, graciles, volubiles, teretes. Folia infima verticillata, mox opposita, dein alterna, ovata, longe mucronata. Flores dioici: masculi pallide ochroleuci. Spicis racemosis: fœminei spicis simplicibus brevioribus. Pedicelli breves. Bracteæ* 1-*riæ. Species* 2. Dioscorea Villosa L. Peltata MS.

Dioscorea. J. L. PLUM. Petala brevissime coalita, recurva, interiora parum latiora. Filamenta 6, brevissima. Antheræ subrotundæ, emarginatæ. Styli brevissime coaliti. Stigmata reflexa, 2-furca. Semina undique alata. *Herba in* America Æquinoctiali, 30-*pedalis vel plus. Radix informis. Caulis volubilis. Stipulæ nullæ. Folia alterna, cordata, 9-nervia. Flores dioici, masculi e figurâ* PLUMIERI *tantum mihi noti: fœminei Spicâ longâ simplici, pedicellati, penduli. Bracteæ* 1-*riæ. Species modo* 1 *adhuc certa.* D. scandens foliis Tamni fructu racemoso. PLUM. *Gen. p.* 9. *Ic.* 117. *f.* 1.

Polynome. Petala brevissime coalita, recurva, interiora angustiora. Filamenta 6, brevissima. Antheræ late ovales, emarginatæ. Styli, Stigmata et Semina ut in *Dioscorea. Herbæ in* Hindostan, 30-*pedales vel plus. Radix grandis. Caulis volubilis, nunc alatus, axillis petiolorum sæpe bulbifer. Stipulæ* 2, *margine petioli confluentes. Folia alterna, cordata,* 7–9-*nervia. Flores dioici, albi, demum atrorubri, sessiles. Spicæ masculæ pendulæ, ramis* 2–3 *longis ad basin; fœmineæ simplices. Bracteæ* 2. *πολυ multum νομη pabulum. Species* 2. Dioscorea Bulbifera et Alata. *L. Separavi a* Dioscorea *ob Stipulas, et Flores sessiles; præterea ni fallor, Petala omnino discrepant.*

Strophis. Petala brevissime coalita, incurva, interiora angustiora. Filamenta nulla. Antheræ tantum 3, sessiles, oblongæ. Styli discreti. Stigmata reflexa, acuta. Semina undique alata. *Frutex in* Cochin *sylvis. Radix informis. Caulis gracilis, teres. Cirrhi* 2 *ad basin petiolorum. Folia opposita, ovato-lanceolata,* 3-*nervia. Flores hermaphroditi. Spicæ* 3-*floræ. Pedicelli breves. στροφις versatilis. Species* 1. Dioscorea Cirrhosa LOUR.

Elephantodon. Petala brevissime coalita, erecto-patentia, ovata, carnosa, interiora latiora. Filamenta 6, brevissima. Antheræ subrotundæ, emarginatæ. Styli discreti. Stigmata reflexa. Semina ovata, an alata? *Frutex in* Cochin. *Radix albedine et forma incisorum* Elephantis. *Caulis volubilis, inermis. Folia alterna, cordata,* 7-*nervia, glabra. Flores hermaphroditi, forsan pedicellati cum* "racemosos" *tradiderit* LOUREIRO. *Species* 1. Dioscorea Eburnea LOUR.

Testudinaria. Petala in cyathum coalita, dein reclinata, oblonga,

interiora parum latiora. Filamenta 6, longiuscula. Antheræ oblongæ, emarginulatæ. Styli coaliti. Stigmata recurva, obtusa. Semina apice alata. *Herbæ in Promontorio* Bonæ Spei, 7–12-*pedales. Radix in Tuber grande areolatum supra terram eminens. Caulis superne volubilis, teres, rigidus at quotannis periens. Folia alterna, reniformia, in unâ* Soldanillæ. *Flores dioici; masculi spicis laxis parum ramosis; fœminei brevibus; erecti, viridi-flavescentes. Pedicelli breves. Bracteæ* 1-*riæ. Species* 2. Tamus Elephantipes L'HÉR. *aliaque a* BURCHELL *detecta.*

B. DE JUSSIEU joined *Dioscorideæ* to *Asparageæ*, in which he is followed by his illustrious nephew; but they differ widely in other characters besides those above detailed; neither can I think that *Mr.* R. BROWN has judged more correctly in saying that they "*constituunt familiam Smilaceis proximam*"; for the Pedicels of *Smilaceæ* are articulated at their base, their Petals deciduous, and the Embryo of their Seeds remote from the Hilum in hard solid Albumen. In *Dioscorideæ* on the contrary, the Leaves are occasionally decompounded; Pedicels never articulated; Flowers often sessile and partly immersed in the Peduncle, like those of some other *Spadiciferæ*; Petals not falling off after they decay; Embryo of their Seeds close to the Hilum with a Plumula more or less visible. Their affinity to this Class is likewise confirmed by a Species discovered in the fatal expedition to the River *Congo*, which according to *Captain* TUCKEY's narrative, required 4 day's boiling to free it from its pernicious qualities. I cannot hesitate therefore to place them after *Tacca*, dividing the Order, which was first suggested to be one by DRYANDER, into 3 Sections from the structure of its Pericarpium. *Oncus* being described by LOUREIRO with succulent Fruit, goes with *Tamus* into the first Section, differing from that Genus in its hermaphrodite Flowers. *Tamus* has stipules, in our indigenous species *Communis* reflexed, and somewhat like rudiments of Cirrhi; and an unpublished Plant allied to this, which MASSON discovered in one of the *Canary* Islands, may possibly be sui Generis, having male Flowers of a dark purple colour, bowl-shaped, and in Panicles branched like those of some *Menispermeæ*, an Order to which *Dioscorideæ* approach in many other points. *Rajania* is at present the only Genus of the second Section, and when in Fruit, immediately known by the two small abortive lobes of its Capsule, that which is fertile being winged like a Samara. In the third Section all the Genera have very similar 3-lobed Capsules, but they differ widely in other parts. *Hamatris* is strongly characterized, the 3 outer divisions of its floral Envelope being so minute as to have escaped JACQUIN's notice, and the 3 inner are valved in æstivation; its 3 stigmata likewise being each deeply cloven look like 6; its Seeds are only winged at the top; Leaves ternate with prickly Ribs; Flowers sessile, and the males partly immersed in the Rachis of the Peduncle. *Merione* has more equal Petals, spreading out widely; Filaments so deeply bifurcous that the lobes of the Anthers are separate as in some *Ericeæ*; Seeds winged all round; a Root divided into many small branches, very

like that *Anemone Nemorosa*; Leaves at the bottom of the Stem verticillated, but soon opposite, and then the greater part alternate. In *Dioscorea* I only leave those Species which agree with PLUMIER's type, incorrectly quoted by LINNÉ for his *Sativa*; HUMBOLDT first distinguished it in WILLDENOW's Species Plantarum by the name of *Piperifolia*; this has no Stipules, and its inner Petals rather broader, but the other parts of its Flower agree with the next Genus *Polynome*, which I separate on account of its Stipules and sessile Flowers; this name alludes to the great quantity of food its Tubers afford. *Strophis* has a Stem climbing by Cirrhi, opposite Leaves, and hermaphrodite Flowers, with only 3 sessile Anthers according to LOUREIRO, on whose sole authority it is proposed. *Elephantodon* is also an hermaphrodite Genus, but without Cirrhi, its inner Petals broader, and 6 fertile Stamina; its Tubers resemble the Tusks of an *Elephant* so much both in colour and shape, that the *Cochin* name of this Plant alludes to it. *Testudinaria* grows wild at the *Cape* of *Good Hope*, and the first species was referred to *Tamus* by L'HÉRITIER merely from the conformity of its male Flowers, he never having seen the Capsules, which are precisely those of *Dioscorea*; the Stems, though hard and tough, are nevertheless herbaceous, dying down to the Tuber annually; Styles united; Stigmata short and obtuse; Seeds only winged at the top; and these differences joined to their longer floral Envelope, which *Mr.* J. B. KER expressly says ought to be called a Corolla, take away all doubt about separating these Plants from *Dioscorea*; my name is derived from their singular Tubers, projecting above ground with the bark tessellated in such a manner, that MASSON told me the first time he saw *Elephantipes* in a garden at *Cape Town* without Leaves, he took it for an hybernating *Tortoise*.

Ord. 11. ERIOSPERMEÆ.

Petals 6, basi coalita, ovata vel elliptica, subæqualia, marcescentia. Filamenta 6, basi petalorum 1–2 seriebus inserta, lata, basi plus minus confluentia, marcescentia. Antheræ 2-loculares, 4-valves, introrsum dehiscentes. Pericarpium fere Dioscoreæ quamvis superum, membranaceum, 3-loculare, 3-valve, post dehiscentiam reflexum. Stylus 1. Stigma parvum, 3-lobum. Semina 5–7 in singulis loculis, versus basin septorum inserta, erecta, lagenæformia; Tunica fulva, coriacea, in Stipitem attenuata, Villis densissimis ante Valvæ dehiscunt conduplicatis barbata, a medio ad chalazam amplam apicis tenui Albumine vestita: Embryo fere magnitudine Seminis: Radicula sub Chalaza; Cotyledon ultra albumen protenta versus stipitem, compressiuscula; Rima Plumulave nulla, si in uno exemplari e multis tantum perfecto recte descripserim. *Herbæ in Promontorio* Bonæ Spei. *Radix tuberosa, sæpe informis, inferne fibras spurias agens, succo adstringente. Folia hinc inde e tubere* 1-*ria, polymorpha, simplicia; aut cauliculo dense alterna, et inciso-multifida; carnosa, vesiculis rubris subtus aspersa, parum nervosa, in cunis lateribus involuta. Stipulæ* 2–3, *si Tuber alte lateat longe vaginantes, carnosæ. Flores ante folia vel rarius simul prodeuntes, erecti, inodori. Spica*

simplex. Pedunculus ex eadem gemmâ cum folio, gracilis. Pedicelli nunc longissimi. Bracteæ 1-*riæ, squamaceæ.*

Eriospermum Jacq. Petala lata ovata, valde imbricata. Filamenta 1 serie inserta, basi parum confluentia, lineari-attenuata, alterna nunc parum longiora. Pericarpium tenellum profunde 3-lobum. *Radix informis, nunc mammillaris. Flores ante folium, albidi luteolive Vittis* 6 *viridi-rubris. Spica rara. Pedunculus* 1–1½-*pedalis. Pedicelli in unâ longissimi. Folia* 1-*ria,* 2–6 *pollices longa : Petiolus angustus, canaliculatus : Lamina multo longior, ovata vel lanceolata, integerrima, vix acuminulata, glabra vel pubescens, rarius glauca. Species* 4. E. Latifolium, Lanceæfolium, Lanuginosum, Pubescens Jacq. *An his jungenda* Parvifolium Jacq. *Filamentis angustioribus inæqualibus abludens?*

Phylloglottis. Petala ut in *Eriospermo.* Filamenta 1 serie inserta, late cuneata, basi in Cotylum confluentia, æqualia. Pericarpium tenellum obtuse 3-lobum. *Radix* Arisari. *Folia solitaria,* 2–2½ *pollices longa ; Petiolus valde canaliculatus : Lamina multo longior, late ovalis ; Ligulas parvas erectas strigosas pubescentesque toto disco exserens unde nomen. Flores lutei Vittis* 6 *fuligineis. Spica longa, rara. Pedunculus simul cum folio,* 1–1½-*pedalis. Pedicelli breves. Species* 1. Eriospermum Folioliferum Jacks. *in Bot. Rep. No.* 521. *cum Ic.*

Thaumaza. Petala erecto-patentia, elliptica. Filamenta 2 seriebus inserta, anguste cuneata. Pericarpium tenellum retuse 3-lobum. *Radix e basi dilatatâ polliciformis. Flores albidi Vittis* 6 *viridirubris. Spica brevis, densiuscula. Pedunculus ante folia nudus,* 4–6-*pollicaris, pubescens. Pedicelli brevissimi. Caulis* 4–6-*pollicaris, basi Stipulâ foliaceâ amplexus. Folia alterna, dense sparsa, superiora instar* Delphinii *inciso-multifida, pubescentia ; sed ex analogia* Phylloglottidis, *hæc omnia potius unicum Folium nervo medio Caulem simulante mire decompositum constituant, quod a sagacissimo* De Candolle *determinandum relinquo.* Ornithogalum Paradoxum Jacq. *Coll. Suppl. p.* 81. *t.* 1.

These singular Vegetables form an important Link in the natural chain of *Monocotyledones,* connecting if my opinion be true, the various anomalous Flowers of *Spadiciferæ* with those of a more usual structure in *Coronariæ,* and I believe them to have originally sprung from Parents of these two Classes. In Roots, Leaves, and Fruits, they approach to *Testudinaria,* especially in the *Matériel,* if I may be allowed to use that word, of all those Organs, their Capsules differing merely in being placed above the floral Envelope, and their Seeds having very hollow Albumen ; on the other side, their Petals, Filaments, and Anthers correspond nearly with those of *Eucomis,* which is indigenous in the same country ; some Species of the latter moreover have Bulbs enlarged at the base into a partly tuberous solid Lump of several Heads, as well as Leaves spotted nearly in the same manner. Four species, if not more, are now cultivated here, *Latifolium, Lanceæfolium, Lanuginosum,* and *Parvifolium* ; the last of which having a small turnip-shaped Root, with narrower Filaments

of unequal length, must perhaps be separated when the Order is better known. To the Leaf of *Phylloglottis* I have seen nothing at all analogous except in *Ruscus*; but in that Genus only one Leaflet issues from the nerve of the other, while in *Phylloglottis* they are very numerous all over its disc, ligular, strigose, and pubescent; this induces a suspicion that the Foliage of *Thaumaza* may really consist of a single Leaf still more uncommonly decompounded; JACQUIN however has described it with a Stem, and many scattered multifid Leaves, saying nothing about its affinity to *Eriospermum*.

Clas. 2. CORONARIÆ. L.

A Class so named by LINNÉ, from its Flowers being employed to form Garlands and Chaplets. I limit it nevertheless within narrower bounds than he did, excluding every Genus which has articulated Inflorescence, or Petals rolled in at their sides before they expand, their points especially of the three outer having a pubescent Hook, by which they previously cohere as in *Spathaceæ*. The Roots are perennial tunicated Bulbs, but in a few species, the solid part below their Coats decays so slowly, and is so thick, that they approach in some degree to a Tuber. No Genus is yet known in *Coronariæ* with Pericarpium inferum, and it is always capsular; their Seeds also have a black membranaceous Coat, and Radicle close to the Hilum in hard or fleshy Albumen. Their Flowers are in a simple Spike, which by a gradual abbreviation of its Rachis in some Genera almost becomes a Fasciculus. LINNÉ, who occasionally abused his great authority in thwarting universal custom, called every Inflorescence, howsoever simple and lengthened out, a *Racemus* instead of *Spica*, if the Flowers had any Pedicels. The term *Racemus* however was only used by his predecessors, and the *Latins* with whom it originated, to denote one of the most branched Inflorescences existing, namely a Bunch of Grapes, *βοτρυς* of the Greeks; and though several modern authors continue to pervert its first meaning like LINNÉ, I have not done so lately, but adhered to A. L. DE JUSSIEU's, HALLER's, TOURNEFORT's, and our own excellent Botanist RAY's practice, in describing the Inflorescence.

Ord. 1. EUCOMEÆ.

Petala 6, variè coalita nunc in Tubum, regularia, dorso apicis rarius gibba, nunc post florescentiam vegeta, demum marcescentia. Filamenta petalis variè inserta, nunc ipso limbo. Antheræ 2-loculares, 4-valves, introrsum dehiscentes. Pericarpium superum, 3-loculare, 3-valve, scariosum vel membranaceum, sinubus septiferis variè melliferum. Stylus 1. Stigma parvum, plus minus 3-lobum. Semina nigra numero definita vel indefinita, infra medium vel basi loculorum marginibus septorum inserta, sessilia vel funiculata, erecta, subrotunda, albuminosa; Radicula Hilo versa. *Herbæ in Promontorio* Bonæ Spei $\frac{1}{2}$–$2\frac{1}{2}$-*pedales. Folia* 2–9, *angustissima latissimave, æstate evanida. Spica longissima aut fasciculum mentiens. Pedunculus medio foliorum, rarius axillaris, solidus. Bracteæ* 1-*riæ sub singulis pedicellis, ultimæ in aliis steriles et comosæ.*

Eucomis, Soland. Basilæa, J. Petala brevissime coalita, stellata, oblonga, diu vegeta. Filamenta basi petalorum inserta, in Cotylum confluentia, patentissima, cuneata. Pericarpium turbinatum, membranaceum, poris 3 juxta apicem melliferum. Stylus attenuatus. Stigma minutum. Semina 5–9 in singulis loculis, sessilia, obovata. *Bulbus conicus, cicatricibus tunicarum plus minus annulatus, nunc magnitudine* Pugni *et multiceps, succo graveolente. Folia* 2–9, ½–1½-*pedalia, humifusa, ovalia vel lingulata, sæpe crenulata et subtus maculata. Flores virides, parum nutantes. Pedunculus longitudine foliorum vel plus, crassus, baculiformis. Spica* 20-250-*flora, densa. Bracteæ ultimæ grandes et comosæ. Species* 6, *typo* Corona Regali Dill. *dum* E. Bifolia Jacq. *sequentem stirpem connectit.*

Podocallis. Omnia ut in *Massonia* præter Corollæ Lacinias basi non replicatas; Filamenta breviora, late cuneata; Stylumque basi in Conum tumidum. *Herba in regione fluminis* Visch Rivier, *a* Burchell *detecta. Folia* 2, *humistrata, suborbicularia. Flores nivei. Spica fasciformis, pedunculo hypogæo.* πους *pes* καλλος *pulchritudo. Species* 1. Massonia Nivea. Burch.

Massonia. J. L. Thunb. Corollæ Tubus infundibuliformis: Limbus reclinatus, 6-partitus; Laciniæ cuneatæ, basi replicatæ et plus minus bullatæ: marcescens. Filamenta ore tubi inserta, in sertum confluentia, erecto-patentia, subulata. Pericarpium figura varium, scariosum, supra medium poris 3 melliferum. Stylus subulatus. Stigma minutum. Semina numerosa, brevissime funiculata, subglobosa. *Herbæ in* Roggefeldt Konde Bookgeldt *montibus. Bulbus parvus. Folia* 2, *humistrata, in paucis incurvo-erecta, sæpius late ovalia, nunc pustulata vel pubescentia, carnosa. Flores albidi cum rubore, vel luteoli, rarius suaveolentes. Pedunculus hypogæus. Spica* 10–40-*flora, fasciformis. Bracteæ amplæ, lanceolatæ. Species* 18, *typo* M. latifolia L. *inter has* Pinsilla Mass. *foliis villosis vix pollicem longis gaudet*; *et* Angustifolia L. *demum* Manliliam *jungit.*

Manlilia Thunb. Corollæ Tubus anguste infundibuliformis: Limbus revolutus, 6-partitus; Laciniæ oblongæ, basi planæ: marcescens. Filamenta limbo 2 seriebus inserta, alterna quæ demissius laciniis interioribus opponuntur longiora, patentia, subulata. Pericarpium ovale, membranaceum, 3-lobum, apice poris 3 melliferum. Stylus subulatus. Stigma minutum. Semina 7–10 in singulis loculis, sessilia, obovata. *Herbæ prope* Sondag Rivier, Visch Rivier, 9–1½-*pollicares. Bulbus parvus. Folia* 2–3, *anguste linearia vel late lanceolata, nunc Vittâ albâ per medium, glabra, carnosa. Flores lilacini, erecti, suaveolentes. Spica* 1–20-*flora, densa. Pedunculus parum exsertus. Bracteæ minutæ, ultimæ in una parum comosæ. Pedicelli breves. Species* 3. Polianthes pygmæa, Jacq.; *altera Foliis vittatis apud* Burchell; *tertia* 1-*flora, a beato* Masson *detecta, cujus figura in Tab.*

Bœoterpe. Petala infra medium coalita, dein recurvo-patentia, lanceolata. Filamenta 3 petalis exterioribus opposita infra medium tubi, 3 interioribus opposita ore inserta et altiora contra quod in Manliliâ obtinet, patentia, subulata. Pericarpium ovale, membranaceum, apice poris 3 melliferum. Stylus subulatus. Stigma 3-

lobum. Semina 7–9 in singulis loculis, sessilia, obovata. *Herbæ 3–6-pollicares. Bulbus parvus. Folia 5–6, Stipulâ in unâ grandi et spatham referente vaginata, anguste linearia, semiteretia, carnosa. Flores albi carneive dorso violaceo, erecti vel nutantes. Pedunculus medio foliorum dum floret sæpe brevior, gracilis. Spica 6–10-flora, densa vel rariuscula. Bracteæ minutæ. Pedicelli brevissimi vel longiusculi. βαιος parvus τερπω delecto. Species* 2. Hyacinthus Corymbosus L. Brevifolius, THUNB.

Xeodolon. Petala basi imâ coalita, fere æqualiter revoluta, anthesi peractâ convergentia, oblonga, dorso apicis plana. Filamenta basi limbi 1 serie inserta et ibi attenuata. Pericarpium stipitatum, 6-lobum, basi poris 3 melliferum. Semina 2 in singulis loculis, basi sessilia, erecta, obovata. *Herba 7–10-pollicaris. Bulbus abunde sobolifer. Folia 5–9, in rosam divergentia, lanceolata, supra exquisite rugosa unde nomen, viridia. Flores viridi-purpurei, cernui. Pedunculus medio foliorum adultorum, multo longior et reclinatus, gracilis, teres. Spica* 10–30-*flora. Bracteæ minutissimæ. Pedicelli longi. Species* 1. Hyacinthus Revolutus L. *fig. in Bot. Mag. No.* 1380.

Sugillaria. Petala basi imâ coalita, exteriora magis revoluta, anthesi peractâ convergentia, oblonga, dorso apicis incrassata. Filamenta et Pericarpium ut in *Xeodolo.* Antheræ didymæ an in *Xeodolo. Herbæ* 7–12-*pollicares. Bulbus parum sobolifer. Folia* 7–13, *glauca maculis lividis, in rosam divergentia, lanceolato-cuneata, utrinque lævia, concaviuscula, carnosa, fere per totum annum vegeta. Flores viridi-purpurei, cernui. Pedunculi* 1–5, *axillares, foliis longiores et reclinati, graciles, teretes. Spica* 10–60-*flora, densa. Bracteæ minutæ. Pedicelli longi. Species* 3. Lachenalia Lanceæfolia JACQ. *Ic. t.* 402, *Coll. Suppl. p.* 69, KER *in Bot. Mag. No.* 643, *qui postea sub No.* 1380 *ad* Drimiam! *retulit.*

Eucomeæ may be distinguished from *Lachenaleæ* by their regular Petals, never obliquely confluent with the Pedicel; from *Hyacintheæ* by their Petals not decaying away at the top or falling off, but remaining whole after they wither, about the ripe Capsule; and from *Ornithogaleæ* by their small Stigma. That important Organ in this as well as many other Orders is seldom fully developed, till after its own Anthers have shed their Pollen; hence *Mr.* J. B. KER has called it a simple or inconspicuous Point, and indeed in *Eucomeæ* it is always small; but I have examined no species yet, in which it did not become more or less 3-lobed finally, and when ready to imbibe the contents of the Pollen. *Eucomis* has a green stellated Corolla, variegated in some Species with purple Dots or Lines, continuing fresh till the Fruit is nearly ripe; and the Bulb is generally marked at its base by the scars of the decayed Coats. Six Species are now cultivated in the gardens about *London,* several of which will endure the open air, if planted deep in sheltered places; *E. Punctata* lived for 7 years in my garden at *Mill Hill* without any protection whatever, flowering in profusion; and *E. Bifolia* of JACQUIN having scarcely any comose Bractes introduces the next Genus, *Podocallis.* That interesting Plant is very nearly related to *Massonia,*

but differs partly in the same way as *Strumaria* from *Amaryllis*, and most essentially in the Segments of its Corolla not being transversely folded at their base. *Massonia* consists of 20 Species or more, in all which there is a transverse Fold often inflated, at the base of each Segment of the Corolla. *Mr.* J. B. Ker, when he first gave a Generic character of it in the Botanical Magazine for *April* 1802, imagining this remarkable distinction gradually to disappear in a series of Species omits it entirely, and there joins *Manlilia*, which has quite different Filaments inserted in two series, to the Genus. His second Generic Character of it, in the same work for *Feb.* 1807 is longer, being drawn up to include a third Genus still more discordant both in Leaves and Flowers, *Bœoterpe.* His third, and "*amended Generic character of Massonia,*" as he terms it, is the most diffuse of all; and here he so far corrects his last blunder, as to exclude the two species of *Bœoterpe*, removing them to *Scilla*; but he still omits the transverse folds at the bottom of the Limb. These, however, probably serve an important physiological office, namely to protect the young Fruit from cold; and that indefatigable Collector, whose name the Genus will perpetuate, till some fresh convulsion of our whole Globe may destroy it likewise, told me that all the Species he saw grew in situations, where they were liable to be exposed even to a lower degree of cold than the freezing Point. We find in other Genera which like *Massonia* blossom early in Spring, for instance, *Amygdalus, Ulmus, Mezereon,* an analogous provision to surround the female Organ with a nonconductor of Cold; and it is also worthy of notice, that the preceding Genus *Podocallis*, which has not this protection, was discovered by Burchell in a lower and warmer country near the *Visch Rivier.* I therefore define *Massonia* by a Corolla the tube of which is more or less funnel-shaped; Limb reflexed with a transverse Fold often inflated at the base of each segment; awl-shaped Filaments terminating the Tube and confluent at their base; many obovate pedicellated Seeds inserted below the middle of each Cell, in a scarious Capsule; a very close Spike of Flowers, with a Peduncle hardly reaching beyond the surface of the ground; large Bractes; and generally two broad oval Leaves lying quite flat. Many Species will live here in the open air, if protected during severe Frost, and I have no doubt might be naturalized in warm gardens sloping to the South, at *Kingbridge, Falmouth, Penzance,* the *Cove of Cork,* or *Bantry Bay,* provided they are defended from *Slugs*, which find out and devour their Leaves, in preference to those of all other Vegetables. In the garden formerly Peter Collinson's at *Mill Hill*, which is much more temperate than the valley of the *Thames, Massonia Latifolia* and *Pustulata* were preserved during the 7 years of my residence there, by being planted close to the Greenhouse, 6 inches below the surface in a patch of red loam brought from *St. Vincent's* rock near *Bristol*, with a layer of fine Gravel at the top. In frosty weather each of them was covered with a Beehive, which had an additional lining of Straw. Snow did not appear to affect them at all: on the contrary, a Plant of *Pustulata* on which it was heaped naked one winter, and

continued as long as possible by rolling more to it every fall, covering that with Fern and a double Mat to prevent its melting rapidly when the thaw came, proved rather more vigorous than the others. *Manlilia* is a legitimate Genus, hitherto not well understood, having been referred to *Agapanthus* by WILLDENOW, to *Polianthus* by JACQUIN, to *Hyacinthus* by CAVANILLES, and to *Massonia* by *Mr.* J. B. KER. It differs, however, widely from all of them, in having Filaments inserted beyond the orifice of the Tube, and those are longer which are opposite the inner divisions of the Limb, though attached lower down, an œconomy I am unable to explain. Three Species are discovered, the original type by THUNBERG, which has often 3 or even 4 Leaves, very like those of *Massonia Angustifolia*, and certainly connects the two Genera; a second by BURCHELL with two lanceolate Leaves having a white Midrib; and a third by MASSON here figured in *Tab.*, which has two long narrow linear Leaves, and a single Flower. Under *Bæoterpe* I separate two little Plants, differing from *Manlilia* in the insertion of their Filaments, and their Petals cohere into a shorter obpyramidal Tube, then spreading out widely; their Leaves are more numerous, and narrow, in one Species surrounded by a Stipule so broad and green, that it looks like the Spatha of an *Arum*. I cannot see any immediate affinity in *Xeodolon* and *Sugillaria* to *Drimia*, where *Mr.* J. B. KER removes them, as varieties of one Species. They are unquestionably closely related to one another, especially in their Fruits, but according to my judgment differ too much in other characters to be united even in the same Genus. *Xeodolon*, so named from the rough surface of its Leaves has a truly central Peduncle, but its Bulb being abundantly soboliferous, many Peduncles appear to issue from the axils of the Leaves; its Petals are equally recurved as well as flat at the top; I do not know any other Species, and this is well figured in the 1380th plate of the Botanical Magazine. *Sagillaria* on the contrary forms lateral Bulbs more sparingly, and when vigorous has five or six axillary Peduncles faithfully represented in JACQUIN's figure; or if it only produces one Peduncle, that never issues from the middle of the Leaves, as in *Xeodolon*; and these continue vegetating the whole year; its outer Petals likewise are much more recurved, all thickened behind the top as in many *Lachenaleæ* and *Hyacintheæ*: besides this, I believe two more Species exist. Both Genera have a stipitated Pericarpium, projecting into 6 lobes at the bottom, with only two Seeds in each Cell, and I have no doubt are the offspring of one Mother, by very different Fathers.

Ord. 2. LACHENALEÆ.

Petala 6, pedicello vel ejus rudimento plus minus oblique inserta, varie coalita et irregularia, exteriora dorso apicis sæpius callosa præcipue supremum, post marcuerunt sero vel non detrusa. Filamenta petalis varie inserta, quæ interioribus opponuntur plerumque altius, inclusa vel exserta, patentissima vel erecta, subulata. Antheræ vacillantes, 2-loculares, 4-valves, introrsum dehiscentes. Pericarpium superum, 3-loculare, 3-valve, scariosum, sinubus septiferis aut Re-

ceptaculo melliferum. Stylus subulatus. Stigma minutum. Semina 2–11, nigra, infra apicem singulorum loculorum Funiculo septis adherenti inserta, vel sessilia, erecta, ductu ad Chalazam nunc basi prominente apiculata vel lagenæformia, rarius compressa, albuminosa, lucida; Radicula Hilo versa. *Herbæ in Promontorio* Bonæ Spei, 4–18-*pollicares. Folia* 1–11, *sæpius* 2, *angustissima latissimave, sæpe maculata vel pustulata, hactenus glabra, carnosa, æstate evanida. Flores pene omnium colorum, erecti vel cernui. Spica* 10–80-*flora, sæpe densa. Pedicelli in plurimis breves, nunc deficientes. Bracteæ* 1–2 *sub singulis pedicellis ; ultimæ nunc steriles et parum comosæ.*

Sect. 1. Petala fructu maturo non detrusa.

Himas. Petala obsolete campanulata, interiora vix longiora. Filamenta patentia, longitudine petalorum vel plus. Nectaria 3, oblonga, infra medium sinuum Pericarpii. Semina lagenæformia. *Bulbus parvus. Folia* 5–11, *angusta, linearia vel lineari-attenuata, sæpe maculis aliquot. Flores nutantes, odore* Cratægi *vel* Heliotropii. *Spica densa. Pedicelli brevissimi. ιμας lorum, a figurâ foliorum. Species* 2. Lachenalia Angustifolia et Hyacinthoides. Jacq.

Platyestes. Petala obsolete campanulata, interiora parum longiora. Filamenta nonnihil sursum arcuata, plus minus divergentia, petalis longiora. Nectaria et Semina ignota. *Bulbus subrotundus. Folia* 2–3, *lanceolata vel ovalia, nunc crenulata, in quibusdam pustulata. Flores nutantes, in unâ odore* Hyacinthi Racemosi L. *Spica densa. Pedicelli breves. πλατυεστες, late vestitus. Species* 5. Lachenalia Purpuro-cærulea, Jacq. Nervosa et Racemosa Ker, *duæque ineditæ.*

Monoestes. Petala campanulata infimo porrectiore. Filamenta sursum arcuata, parum approximata, fere longitudine petalorum. Nectaria ignota. Semina globosa. *Bulbus subrotundus. Folium* 1, *basi convolutum, in eandem attenuatum. Flores purpuro-cærulei, cernui, inodori. Spica rariuscula. Pedicelli longi μονοεστες univestitus. Species* 1. Lachenalia Unifolia Jacq.

Chloriza. Petala parum campanulata, 3 interiora longiora et subæqualia. Filamenta parum sursum arcuata, approximata, petalis longiora. Nectaria ignota. Semina apiculata. *Bulbus subrotundus. Folia* 2, *late linearia vel parabolica, nunc pustulata. Flores pallide cærulei vel ochroleuci unde nomen, nutantes, sæpe fragrantes. Spica densa. Pedicelli brevissimi. Species* 6, Lachenalia Unicolor, Fragrans, Pustulata, Mediana, Pallida, Jacq. Lucida Ker. In a blue one at Griffin's 2 May 1821, Odor Convallariæ, Pori meligeri nulli, sed varietate ni fallor Corollæ ipsæ melliferæ. Pericarpium basi obliquum. I think his Flowers were erect.

Orchiops. Petala inferne ventricosa; 3 interiora multo longiora, convoluta apice recurvo. Filamenta erecta, approximata, petalis breviora. Nectaria ignota. Semina lagenæformia. *Bulbus subrotundus. Folia* 2, *late lineari-lanceolata aut ovalia, nunc maculata. Flores erecti, sessiles. Spica densa, nunc longissima. Species* 3. Lachenalia Orchioides Jacq. Orchioides γ Ker, *aliaque inedita.*

Lachenalia JACQ. Petala exteriora in Tubum plus minus coalita, erecta; interiora longiora, convoluta apice patulo. Filamenta parum sursum curva, approximata, fere longitudine petalorum interiorum. Nectarium disco toto Receptaculi. Semina ignota. *Bulbus subrotundus, nunc stolonifer. Folia 2–3, lanceolato-cuneata vel ovalia, sæpe maculata. Flores cernui, inodori vel fragrantes. Spica densa vel rariuscula. Pedicelli breves. Species* 10. L. Luteola, Tricolor, Quadricolor, Pendula, Rubida JACQ. Quadricolor β. KER. Stolonifera MS.

Sect. 2. Petala fructu tumescente detrusa.

Veltheimia GLED. Petala in Tubum longissimum parum inflexum coalita, inde semiorbicularia. Filamenta medio tubi oblique inserta, deflexa, limbum attingentia. Pericarpium argute 3-lobum. Nectarium disco toto Receptaculi. Stylus subulatus. Stigma minutum. Semina 2 rarius 3 in singulis localis, obovata. *Bulbus conicus, mole* Pugni, *basi annulatus. Folia 7–9, viridia glaucave, ampla, ovalia, undulata. Flores carnei, cernui, inodori. Pedunculus crassus, foliis multo longior, cylindricus. Spica 50–80-flora, densissima. Pedicelli brevissimi, in fructu cernui. Bracteæ 2, lineari-attenuatæ, interior sensim deficiens. Species* 2. Aletris Capensis L. V. Glauca. JACQ. *Embryo fere totus in Bulbum mutatur, vide Tab.*

Uropetalon Burch. Petala inferne in Tubum coalita; exteriora dein valde recurva, dorso sæpe longissime mucronata; interiora breviora sed altius conniventia. Filamenta ore tubi 1 serie inserta, brevia, æqualia. Pericarpium fere stipitatum, profunde 3-lobum. Nectarium ignotum. Stylus brevis, crassus. Stigma 3-lobum, Semina compressa, margine rectangulo. *Bulbus ovatus. Folia 3–7, viridia glaucave, lineari-attenuata aut lanceolata. Flores virides glaucive, cernui. Pedunculus gracilis, in unâ sæpe 2½-pedalis. Spica 12–30-flora, rariuscula. Pedicelli breves vel longi. Bracteæ 1-riæ. Species* 4. U. Glaucum, Crispum, BURCH. Hyacinthus Viridis L. *aliaque huic similis a* MASSON *detecta.*

In the course of this work, I have repeatedly alluded to the necessity of attending to the locality of Plants in our endeavours to arrange them according to their natural affinities, mentioning *Mr.* R. BROWN's and HUMBOLDT's observations on this subject; before the latter of these travellers however began his illustrious career, the late *Mr.* DRYANDER, while visiting me at *Chapel Allerton* in 1789, had inculcated even its generic importance, during a regular course of lectures on LINNÉ's Philosophia Botanica; and he then suspected, what every parcel of newly discovered Vegetables has confirmed, that if some which are maritime, and others which by the organisation of their Seeds, are necessarily dispersed very generally over the Globe, be excluded, both Genera and Species are more limited in their stations as they advance from temperate Latitudes towards the Equator, and more extended as they leave the same towards the Poles; he likewise remarked, that as far as he could judge by the small number of Plants then known from *Van Diemen's Island, Falkland Isles,* and *Terra del Fuego,* few Genera and still fewer Species were common

to the *Northern* and *Southern* Hemispheres in cold latitudes. *Lachenaleæ* all grow wild at the *Cape* of *Good Hope,* and differ from other *Coronariæ* in the peculiar obliquity of their floral Envelope at its confluence with the Pedicel, or if less manifestly oblique there, it is irregular in some other part; which two characters joined with their locality confirm the propriety of separating them from *Hyacintheæ,* especially as their Organs of Reproduction are far too discordant to remain in one Genus. The *Delphic* Oracle itself might in vain attempt to reconcile the junction of *Himas* with *Lachenalia,* and for the present I divide them as above. Their Seeds frequently agree in one point with those of *Hypoxideæ,* what appears in an early state to be a Funiculus, becoming afterwards black and indurated like their Coat, of which it is in fact a continuation. It does not follow, however, from this conformity that *Lachenaleæ* and *Hypoxideæ* have any affinity, and a Student of Natural Orders ought to look with a jealous eye at every resemblance however striking, which is unaccompanied by others; for instances have been given, and I could add more, of exactly parallel structures in some one part among Vegetables which differ so widely that they do not even belong to the same primary divisions. One useful corollary to be deduced perhaps from such facts is, that the Deity has ordained few universal laws, as incompatible with that wondrous variety, which if it occasionally puzzles, still delights those who study his works. In the first Section of *Lachenaleæ* the Corolla remains withered round the mature Capsule, and *Himas* from its similitude to *Sugillareæ* takes the lead; it has Petals only cohering at their base, spreading widely out, and hardly irregular; 3 oblong melliferous Pores below the middle of its dissepimental sinuses; Seeds stamped like a Bottle gourd; and many narrow Leaves. *Platyestes* has a more campanulate Corolla then *Himas,* with only two broad Leaves. Monoestes is known directly by its under Petal stretched out beyond the rest, and solitary Leaf beautifully coloured. *Chloriza* has an irregular Corolla, of a pale tint, which has suggested that name; and its Filaments are approximated. The Flowers of *Orchiops* are erect, sessile, and the most irregular of all in this Order. In *Lachenalia* they are again cernuous, as well as tubular or funnel-shaped, the three outer Petals coalescing higher or lower as in *Aloeæ*; and its whole Receptacle or Torus below the Pericarpium is melliferous. In the second Section the Corolla is pushed off when the Pericarpium swells; here *Veltheimia* is an insulated Genus in many respects, having a large conical Bulb, a little ringed at the bottom with the scars of its decayed Coats, like that of *Eucomis,* green or glaucous large oval waved Leaves; a thick cylindrical Peduncle, very close Spike of cernuous Flowers; a long tubular Corolla approaching to that of *Lachenalia,* with the Receptacle melliferous as in that Genus; and sometimes three but most commonly only two sessile Seeds near the middle of each cell; its Capsule always remains pendulous, becoming somewhat inflated with exceedingly comprest lobes, and though it splits at the top is deciduous; one autumn I found several blown to the distance of about a mile from the terrace where the

Plant stood, and Seeds still in their Cells germinating on the damp grass of the field; FABRICIUS has noticed the long adherence of its Seeds, and I believe they never fall out, at least in our cold Climate. *Uropetalon* has been very justly detached from *Lachenalia* by BURCHELL; one Species has large glaucous Leaves, like those of *Veltheimia*; and in another discovered by MASSON, the Mucro of the outer Petals is very short; its Seeds are exceedingly comprest with a rectangular margin like those of *Tricharis* in *Hyacintheæ*, but as there is an evident obliquity at the base of its Corolla, I cannot join them; they are however certainly very nearly related.

Ord. 3. HYACINTHEÆ.

Petala 6, varie coalita, regularia, exteriora vel omnia dorso apicis callosa, post marcuerunt citius ocyusve detrusa. Filamenta petalis varie inserta, angusta latave. Antheræ vacillantes, 2-loculares, 4-valves, introrsum dehiscentes. Pericarpium superum, 3-loculare, 3-valve, scariosum vel membranaceum, sinubus septiferis melliferum. Stylus 1, nunc persistens et cum pericarpio dehiscens. Stigma 3-lobum. Semina nigra, numero definita vel indefinita, altius demissiusve septis inserta, sæpe vix funiculatus formâ varia, nunc Arillo cincta, albuminosa; Radicula Hilo versa. *Herbæ* Boreales, *præcipue circa Mare* Mediterraneum, ½–4-*pedales. Folia* 1–12, *angustissima latave, linearia vel lanceolata, raro ciliata, æstate evanida. Flores cernui vel erecti. Spica nunc longissima. Pedunculus medio foliorum novorum, vel rarius præcocior aut axillaris, teres, nunc fistulosus. Bracteæ* 1–2 *ad singulos pedicellos, longæ vel brevissimæ, in paucis omnino deficientes. Pedicelli in fructu sæpius erecti.*

Tricharis. Petala inferne in Tubum coalita; exteriora recurva, dorso apicis gibba; interiora parum breviora, tamen altius convoluta. Filamenta ore tubi 1 serie inserta, medium limbi fere attingentia, lineari-attenuata, æqualia. Antheræ obtusæ. Pericarpium profunde 3-lobum, membranaceum, basi poris 3 melliferum. Stylus linearis, deciduus. Stigma mitræforme. Semina numerosa, a basi ad apicem loculorum, compressa margine rectangulo, glabra. *Herbæ in regione* Atlantis, Espana et Portugal, 10–14-*pollicares. Folia* 4–5, *lineari-attenuata, obtuse mucronata, concava. Flores sordide rubri vel lateritii, cernui. Pedunculus foliis demum longior, gracilis. Spica* 9–21-*flora, rariuscula. Bracteæ* 2 *sub pedicellis infimis, mox* 1-*riæ. Pedicelli breves, in fructu erecti.* τρεις *tres,* χαρις *gaudium. Species* 2. Hyacinthus Serotinus L. *aliaque a* BROUSSONET *missa e* Mogador, *cujus fig. in Bot. Mag. No.* 1185.

Comus. Corolla cyathiformis, brevissime 6-fida: Laciniæ recurvæ, semiorbiculares, dorso apicis vix incrassatæ. Filamenta supra medium cyathi 2 seriebus inserta, brevissima, cuneata. Pericarpium late ovatum, profunde 3-lobum, membranaceum, basi poris 3 melliferum. Stylus brevis, deciduus. Stigma parvum. Semina 2 ad basin loculorum, globosa, minutissime pappillosa. *Herba in regione* Atlantis, Tunis, *Ins.* Cypro, 10–15-*pollicaris. Folia* 3–5, *late lineari-attenuata, integerrima, concava. Flores badii, cernui, inodori; superiores amethystini erecti sterilesque. Pedunculus medio foliorum*

adultorum, paulo longior, gracilis. Spica 30–60-*flora, apice corymbosa. Pedicellis sterilibus longioribus. Bracteæ* 1-*riæ, minutæ. Nomen Poeticum. Species* 1. Hyacinthus carnosus L. *An hujusce lusus* Monstrosus L.

Busbequia. Corolla poculiformis, brevissime 6-fida; Laciniæ patentes, semiorbiculares, exteriores dorso gibbæ, interiores angustiores. Filamenta supra medium tubi 1 serie inserta, inter se discreta, cuneata. Pericarpium obcordatum, argute 3-lobum, scariosum, basi poris 3 melliferum. Stylus brevis, deciduus. Stigma 3-lobum. Semina 2 infra medium loculorum, globosa, æquata rore glauco. *Herba in* Apulia, Caucaso, Syria, *arvis*, $1\frac{1}{2}$-*pedalis. Folia* 5–6, *lineari-lanceolata, ciliata, concava. Flores albidi, mox badii, cernui, inodori. Pedunculus medio foliorum, longior et crassiusculus. Spica* 30–50-*flora, densiuscula. Pedicelli in fructu erecti et omnes elongati. Bracteæ* 1-*riæ, minutæ.* AUGER DE BUSBEQUE Flander Insulanus, Constantinopoli *legatus, et Botanicus suo tempore* 1600 *insignis. Species* 1. Hyacinthus Ciliaris. CYRILL.

Moscharia, T. Corolla ovata, apice in Umbilicum 6-gibbum depressa disco brevissime 6-fido; Laciniæ recurvæ, ovatæ. Filamenta juxta medium tubi 2 seriebus proximis inserta, cuneata. Pericarpium subrotundum, argute 3-lobum, apice poris 3 melliferum, scariosum. Hylus brevis, crassus. Stigma lobis 3 retusis. Semina 2 juxta basin loculorum, erecta; matura in nostro exemplari jam caduca. *Herbæ juxta* Bagdad, Aleppo, 7–10-*pollicares. Folia* 4–5, *patentia, late linearia, obtusa, concava. Flores flavo-virides, nutantes, fragrantissimi. Pedunculus medio foliorum novorum, gracilis. Spica* 18–30-*flora, densa. Bracteæ* 1-*riæ, basi saccatæ. Pedicelli brevissimi. Species* 2. Hyacinthus Muscari L. *aliaque minor a* Cl. HAWORTH *dudum culta.*

Botryphile. Corolla ovata, apice convexa nec 6-gibba brevissime 6-fida; Laciniæ recurvæ, semiovales, exteriores basi ventricosulæ. Filamenta supra medium tubi 2 seriebus inserta, linearia. Pericarpium subrotundum, argute 3-lobum, scariosum, basi poris 3 melliferum. Stylus fere altitudine corollæ, gracilis, deciduus. Stigma capitatum, 3-lobum. Semina 2 juxta basin loculorum, erecta, globosa, basi apiculata, rugosa. *Herbæ in regione* Atlantis, Italia, Peloponneso, 7–10-*pollicares. Bulbus in aliis abunde sobolifer. Folia numerosa, anguste linearia, fine* Autumni *prodeuntia; vel pauciora, lata, nec ante initium veris. Flores cærulei, nutantes, fragrantes vel inodori. Pedunculus medio foliorum adultorum vel novorum, gracilis vel crassiusculus. Spica* 20–40-*flora, densissima vel rara. Pedicelli brevissimi. Bracteæ* 1-*riæ, parvæ. Species* 4. Hyacinthus racemosus L. *aliaque similis minor* Botryoides L. Parviflorus DESF.

Bellevalia, LAPEYR. Petala in calathum coalita, dein recurvula, exteriora dorso apicis gibba. Filamenta ore calathi inserta, inferne confluentia, æqualia. Pericarpium subrotundum, 3-lobum, scariosum, basi poris 3 melliferum. Stylus attenuatus, deciduus. Stigma 3-lobum. Semina 2 juxta medium loculorum, erecta, globosa, minute rugosa. *Herbæ in* Tunis, *Ins.* Cypro, *prope* Romam, *locis hyeme inundatis*, 10–16-*pollicares. Folia* 4–5, *recurva, lineari-attenuata,*

concava, dorso striata. Flores albidi, nutantes, inodori. Pedunculus medio foliorum, crassiusculus. Spica 20-flora, densiuscula. Pedicelli breves, in fructu erecti. Bracteæ 1-riæ, basi saccatæ. Species 1. Hyacinthus Romanus L.

Hyacinthus. J. L. T. Petala in urceum coalita, dein recurva, exteriora dorso apicis gibba. Filamenta medio urcei 1 serie inserta, brevissima, cuneata, alterna parum latiora. Pericarpium subrotundum, carnosum, demum coriaceum, apice poris 3 melliferum. Stylus crassus, sero deciduus. Stigma mitræforme. Semina 7–11, a basi ad apicem loculorum, globosa, Arillo albo immersa. *Herbæ in Ins.* Cypro, *prope* Bagdad, Aleppo, 8–12-*pollicares. Bulbus sphæricus. Folia* 5–6, *patentia, late linearia, obtusa, concava. Flores fere omnium colorum, nutantes, fragrantes. Pedunculus medio foliorum novorum, crassus, in fructu dejectus. Spica* 9–21-*flora, densa. Pedicelli brevissimi, in fructu cernui. Bracteæ* 1-*riæ, basi saccatæ. Species* 2. H. Orientalis L. Brumalis, PARK.

Brimeura. Petala in cyathum coalita, dein recurva, oblonga, exteriora dorso apicis gibba. Filamenta ore cyathi inserta, alterna longiora, lineari-attenuata. Pericarpium subrotundum, 3-lobum, maturum ignotum. Stylus attenuatus, marcescens. Stigma parvum, 3-lobum. Semina ignota. *Herba in montibus* Pyrenees, 9–15-*pollicaris. Bulbus et Folia ut in* Hylomene *sed hæc paulo angustiora. Flores cærulei, nutantes. Pedunculus medio foliorum, vix longior, crassiusculus, erectus. Spica* 9–20-*flora, rariuscula. Pedicelli sensim breviores, in fructu erecti secundum* L'ECLUSE. *Bracteæ* 1-*riæ, lineari-attenuatæ.* MARIA DE BRIMEUR, *amore et culturâ Florum in tempore* CLUSII *inclyta. Species* 1. Hyacinthus Amethystinus L.

Hylomenes. Usteria MED. Petala disco basis coalita, plus minus convergentia in cylindrum, dein recurva, oblonga. Filamenta infra medium petalorum 2 seriebus inserta, quæ interioribus opposita demissius, decurrentia et basi confluentia, subulata. Pericarpium ovatum, retuse 3-lobum, membranaceum, basi poris 3 melliferum. Stylus attenuatus. Stigma parvum, 3-lobum. Semina 6-9 a basi ad apicem loculorum, lentiformia, rugosula, glabra. *Herbæ in Ins.* Great Britain *ubique,* France, Portugal, *nemorosis,* 10–16-*pollicares. Bulbus ovalis. Folia* 5–7, *patentia, late linearia, concava. Flores sordide cærulei, cernui vel erecti, vix grati odoris. Pedunculus medio foliorum adultorum, mox longior, crassus, nunc apice nutans. Spica* 7–21-*flora, sensim densior. Pedicelli in fructu erecti, infimi nunc longi. Bracteæ* 2, *lineari-attenuatæ, υλη sylva μενω habito. Species* 2. Hyacinthus Non Scriptus L. Scilla Campanulata L. *inter quas multæ varietates.*

Somera. Petala disco basis coalita, stellata, ovali-lanceolata. Filamenta basi petalorum 1 serie inserta, parum confluentia, patentissima, anguste cuneata. Pericarpium, Stylus, et Stigma ut in Hylomene. Semina 2 juxta basin loculorum, matura ignota. *Herba in* Piedmonte, *circa* Nice *nemorosis,* 8–12-*pollicaris. Folia* 5–7, *patentia, late linearia, glabra, acute carinata. Flores cærulei, erecti, odore* Salicum. *Pedunculus medio foliorum novorum, gracilis. Spica* 9–17-*flora, densa. Pedicelli longiusculi. Bracteæ* 2, *lineari attenu-*

atæ. JAN SOMER, Medioburgensis, *plantarum* Albaniæ et Macedoniæ *collector, circa* 1600 *floruit. Species* 1. Scilla Italica L.

Basaltogeton. Petala disco basis coalita, stellata, oblongo-lanceolata. Filamenta basi petalorum 1 serie inserta, parum confluentia, patentissima, lanceolato-cuneata dorso convexo. Pericarpium turbinatum, membranaceum, supra medium poris 3 oblongis melliferum. Stylus attenuatus, cum pericarpio dehiscens. Stigma 3-lobum. Semina 6–7 infra medium loculorum, obovata, rugosa. *Herbæ in* Portugal *collibus basalticis, prope* Cadiz *orâ* Atlantis, 9–12-*pollicares. Folia 7–9 in rosam patentia, 7–9 lineas lata, sensim attenuata, glabra, concava. Flores violacei, erecti, inodori. Pedunculus medio foliorum adultorum, dum florens brevior, crassus. Spica* 60–100-*flora, pyramidalis, densissima. Pedicelli longi. Bracteæ* 1-*riæ, inferiores in unâ longissimæ. Species 2 secundum* HAWORTH, Scilla Peruviana L. *fig. in Clus. Hist. p.* 173 *et* 182, *aliaque sub eodem titulo inepto in Bot. Mag. No.* 749, *quæ tantum mihi visa.*

Petranthe. Petala disco basis coalita, stellata, elliptica. Filamenta basi petalorum 1 serie inserta, parum confluentia, patentia, lanceolato-cuneata dorso concavo. Pericarpium pulvinatum, membranaceum, infra medium poris 3 rotundis melliferum. Stylus parum attenuatus, deciduus. Stigma 3-lobum. Semina 4 juxta medium loculorum, matura ignota. *Herba in* Denmark, Wales, *Juss.* Mona, Iona et Staffa, *clivis maritimis,* 5–9-*pollicaris. Folia* 7–9, *patentia, lineari-lanceolata, glabra. Flores cærulei, erecti, odore vinoso* Amaryllidis. *Pedunculus medio foliorum novorum, vix longior; gracilis. Spica* 6–10-*flora, parum corymbosa. Pedicelli longiusculi. Bracteæ* 1-*riæ, longitudine pedicellorum,* πετρος *saxum* ανθος *flos. Species* 1. Scilla Verna L.

Sitocodium. Petala disco basis coalita, stellata, oblonga, basi undulata. Filamenta basi petalorum 1 serie inserta, inter se discreta, patentissima, subulata. Pericarpium subrotundum, membranaceum, basi poris 3 melliferum. Stylus cylindricus, deciduus. Stigma 3-fidum. Semina 6–7 infra apicem loculorum, obovata, æquata, lucida. *Herba prope flumina* Missouri, Huron, Ohio, *vallibus,* 1½-*pedalis. Bulbus magnitudine* Juglandis, *edulis. Folia* 5–7, *parum glauca, patentia, lineari-lanceolata, supra lævia, subtus lucida, carinata. Flores pallide cærulei, suberecti, odore levi Philadelphi. Spica* 20–50-*flora, densa. Pedunculus medio foliorum adultorum, longior et crassiusculus. Pedicelli* 5–6 *lineas longi. Bracteæ* 1-*riæ, longitudine pedicellorum lineari-attenuatæ,* σιτος *panis* κωδιον *corium. Species* 1. Phalangium Esculentum NUTT. *certo autem hujus Ordinis.*

Puschkinia BIBERST. "Corolla 1-petala, 6-partita. Nectarium brevissimum, 6-dentatum, coronans faucem. Stamina infra nectarium. *Herba in* Gurgistan *plagis orientalibus. Habitus, Bulbus Foliaque* Scillæ Amœnæ. *Flores racemosi,* 2–10. *Pedicelli fructiferi longiores. Bracteæ tantum rudimentum. Corolla dilute amethystina.* Nectarium dentibus erectis emarginatis. Filamenta brevissima." BIBERST. *Species* 1. P. scilloides, BIBERST. *In Horto Societatis Horticulturæ* Londinensis *hodie* 1820 *culta, sed nondum floruit.*

Monocallis. Petala disco basis coalita, stellata, elliptica. Filamenta

mox supra basin petalorum 1 serie inserta, parum confluentia, patentia, lanceolato-cuneata, plana. Pericarpium ovatum, basi poris 3 melliferum, maturum ignotum. Stylus longus, cylindricus. Stigma 3-lobum. Semina 6–7 infra medium loculorum, matura ignota. *Herba prope* Lisboa *ericetis copiose, 4–7-pollicaris. Folium* 1, *rarissime alterum, lanceolato-attenuatum, concavum. Flores cernui, erecti. Pedunculus folio vaginatus et sæpe longior, crassiusculus. Spica* 6–20-*flora, superne densior. Pedicelli sensim breviores. Bracteæ* 1-*riæ, albæ, ovato-attenuatæ, inferiores pedicillo parum longiores. Species* 1. Scilla Monophyllos LINK.

Othocallis. Petala disco basis coalita, stellata, ovali-lanceolata, mox decidua. Filamenta basi petalorum 1 serie inserta, in cotylum confluentia, inde subulata. Pericarpium ovatum, membranaceum, basi poris 3 melliferum. Stylus longus, superne crassior, deciduus. Stigma 3-lobum. Semina 5–9, a basi ad apicem loculorum, obovata, rugulosa. *Herbæ juxta* Marencin *deserto arenoso* Burdigalensi, *in* Austria, *et regione fluminis* Volgæ, 5–7-*pollicares. Folia* 5–6, *patentissima, late linearia, obtusa, concava. Flores cærulei, suberecti vel nutantes, inodori. Pedunculus medio foliorum novorum, crassiusculus, angulatus, fistulosus, in fructu dejectus. Spica* 1–10-*flora, superne densior. Pedicelli sensim breviores. Bracteæ* 1-*riæ brevissimæ. ωθεω trudo, καλλος pulchritudo. Species* 2. Scilla Amœna L. Sibirica HAW.

Rinopodium. Petala disco basis coalita, stellata, ovali-lanceolata, sero detrusa. Filamenta basi petalorum 1 serie inserta, ibi confluentia, patentissima, anguste cuneata. Pericarpium subrotundum, membranaceum, basi poris 3 abunde melliferum unde nomen. Stylus sensim attenuatus, deciduus. Stigma 3-lobum. Semina 7–9 a basi ad apicem loculorum, matura ignota. *Herba prope* Grutz, *in* Savoy, Dauphiné, *abunde, nemorosis,* 5–7-*pollicaris. Folia* 2–3, *patentia, late linearia obtusa, concava. Flores cærulei, erecti, inodori. Pedunculus medio foliorum tenellorum, paulo longior, crassiusculus, angulatus, in fructu dejectus. Spica* 7–15-*flora, secunda, densiuscula. Pedicelli sensim breviores. Bracteæ* 1-*riæ, minutæ, sæpe nullæ. Species* 1. Scilla Bifolia L.

Prospero. Petala disco basis coalita, stellata, spatulato-lanceolata, dorso apicis gibba. Filamenta basi petalorum inserta, parum confluentia, lanceolato-attenuata. Pericarpium turbinatum, apice 1-loculare, membranaceum, supra medium poris 3 melliferum. Stylus attenuatus, deciduus, Stigma 3-lobum. Semina 2 ad basin loculi, dorso convexa. *Herbæ in Ins.* Great Britain, Portugal *et regione* Atlantis ½–3-*pedales. Bulbus* ½–2 *pollices diametro. Folio* 5–9, *angustissima vel lata. Flores cærulei purpureive, erecti. Pedunculus ante folia vel simul prodeuns axillâ exteriorum, nunc multo longior. Spica* 20–100-*flora. Pedicelli breves longive. Bracteæ* 1-*riæ, parvæ, aut deficientes. προσ juxta, περαω transeo. Species* 7. Scilla Autumnalis L. *alia cujus fig. in Bot. Mag. No.* 909. *An his recte junxerim* Obtusifolium, Parviflorum, Lingulatum Undulatum DESF. et Hyacinthoideum L.

Scilla. J. L., DIOSC. Petala disco basis coalita, stellata, ovalia. Fila-

menta basi petalorum inserta, inter se discreta, lineari-attenuata. Pericarpium conicum, 3-lobum, membranaceum, apice circa poros 3 melliferos prominulum. Semina numerosa a basi ad apicem loculorum, erecta, compressa, undique alata, glabra. *Herbæ in littoribus* Græciæ, *Maris* Mediterranei, *circa* Portugal *usque ad* Normandy, *necnon secundum* LINK *longe a mari ad pedes montium* Estrella. *Bulbus mole* Pugni, *succo acri. Flores albi striis* 6 *sordide violaceis, erecti, inodori. Pedunculus ante folia, nudus* Augusto, 3–4-*pedalis. Spica* 60–120-*flora. Pedicelli pollicares. Bracteæ attenuatæ. Folia* 7–9, Novembri *prodeuntia, pedalia, in rosam patentia, lanceolata, integerrima, glabra. Species* 1. Scilla Maritima L. *Cfr.* Ornithoglaum Elatum JACKS. *in Bot. Rep. No.* 528, *a Cl. peregrinatore* J. M. CRIPPS *armigero, campis* Alexandriæ *effossum.*

One essential character of *Hyacintheæ* consists in their regular Petals; a second will be found in the tendency of those Organs to decay away at the top, or fall off entirely, leaving the ripe Pericarpium naked; a third in their decidedly perigynous Filaments, so that a Petal cannot be pulled off without bringing the opposite Filament along with it, and fourthly, they are confined to the *Northern* Hemisphere. I cannot follow *Mr.* J. B. KER in joining *Hyacinthus Serotinus* of LINNÉ to *Uropetalon* in the preceding Order; this species, and another sent to me from *Mogador* by BROUSSONET, which is figured in the 1085th number of the Botanical Magazine, differ so materially in their Corolla not being gradually confluent with the Pedicel, and longer Filaments, that I call them *Tricharis. Comus* next introduces all the species of the Order, which have two globular Seeds in each Cell, but differing widely in other points; its upper Flowers are on long erect Pedicels, forming a fine amethystine corymbus, but they are barren, and the lower ones on short Pedicels fertile; Filamênts inserted in two series and narrow; Seeds very finely pappillose. *Busbequia* has a more cup-shaped Corolla than *Comus* with very short recurved segment gibbous below the top; Filaments in one series; a mitre shaped Stigma, Pericarpium obcordate, slightly winged, and as it swells the Pedicel grows out to a great length; the Seeds are perfectly smooth with a fine glaucous dew; I have named this Plant after AUGER DE BUSBEQUE, who was a great encourager of Botany in L'ECLUSE's time, and while ambassador at *Constantinople* sent many exotics from thence to *Vienna.* Under *Moscharia* of TOURNEFORT I only combine those species which have an egg-shaped Corolla with six Hunches near the top, beyond which it is depressed into an Umbilicus divided at the center into 6 equal segments. *Botryphile* differs from *Moscharia* in having no Umbilicus, and scarcely any protuberances near the top of its Corolla, as well as a totally different Style and Stigma; its seeds are strongly wrinkled and apiculated at the base; and the Leaves of an unpublished species cultivated by HAWORTH are still narrower than in *Racemosus. Bellevalia* has been established some time by PICOT DE LA PEYROUSE; its Petals are united into a Bowl, spreading regularly out at the top, with retuse dorsal Hunches; Filaments inserted at the orifice of the Bowl and there confluent; its Pericarpium has 3

melliferous Pores at the bottom, and Seeds inserted just under the middle of each Cell. In *Hyacinthus,* the Petals are united into a pitcher-shaped Tube, and from thence pretty equally recurved; Filaments inserted in a single series about the middle of the Tube, very short and broad; its Pericarpium is very fleshy, with 3 melliferous Pores at the top of the dissepimental sinusses: Style very short; Stigma mitre-shaped; and its Seeds, which are numerous, immersed in a white Arillus. *Brimeura* is a middle Genus between *Hyacinthus* and *Hylomenes,* but more nearly allied to the latter, as is evident from its long blue Bractes, and alternate Filaments shorter than the others; it is so named after a *Dutch* Lady, MARIA DE BRIMEUR, gratefully mentioned by L'ECLUSE, for her love of Plants. *Hylomenes,* our vulgar *English Harebell,* was long ago justly detached from both *Hyacinthus* and *Scilla,* by MEDICUS, who called it *Usteria*; but that name being now generally applied to a more singular Genus from *Sierra Leone,* I have given it one derived from the groves and thickets, which it ornaments so highly in spring. Nothing can be much more idle than what *Sir* J. E. SMITH says relative to it; his words in English Botany are. "*Petals perfectly distinct at their base. Germen with six sides, but we agree with Dr. Withering and Mr. Relhan, that it is destitute of the Honey pores, which make the character of Hyacinthus. So many authors have been at a loss to find the Honey pores in any species of Hyacinthus, that the want of them in this would hardly justify the removing it to Scilla; but the Corolla being of six distinct Petals, added to its perfect affinity with Campanulata, will it is hoped justify this alteration, which has often been hinted at, but never ventured upon entirely.*" Again in his subsequent work of Flora Britannica, he describes its "*Petala persistentia; Stamina filiformia, æqualia; Germen poris nectariferis plane destitutum.*" The Petals in this Genus, however, so far from being distinct, are completely united by their discs, a very usual mode of cohesion in all the three Classes of *Coronariæ, Spathaceæ,* and *Sarmentaceæ,* soon withering and nearly vanishing by the time the Fruit is ripe; nor have I yet examined any Flower of *Hyacinthus Non Scriptus* L. in which the Ovarium was without three very conspicuous Honey pores, at the base of its dissepimental sinusses. A difference in the situation of these Honey pores moreover, being probably in some degree connected with the fœcundation of the Stigma, by forcing Insects to penetrate more or less into the Flower, and as far as my experience goes accompanied by differences in other parts, they become characters of real Generic importance. *Hyacinthus non Scriptus* L. differs widely from *Scilla,* as DRYANDER always contended, not in having "*a solid Root*" which *Sir* J. E. SMITH again blunders in making one of its specific characters, for the Bulb is truly tunicated in both; but in its whole Habit, Peduncle coming up a little after the Leaves and surrounded by them, not naked on one side before they appear; two long Bractes of the same blue colour as the Petals under each Pedicel; Filaments inserted in two series considerably above the base of the Petals; and very materially in its Seeds, which are globular and wrinkled after they dry, not flat and winged. *Somera*

approaches so closely to *Hylomenes*, that I should gladly have left them in one Genus; but its Filaments are inserted in a single series, and its Pericarpium has only two Seeds in each Cell; it may therefore serve to perpetuate the memory of a very zealous Botanist, JAN SOMER, son of a *Middlebourg* Burgomaster, who introduced many Plants into *Holland* from *Albania* and *Macedonia*, in LOBEL's time. *Basaltogeton* is distinguished by stellated Petals; Filaments inserted in one series at their base and convex behind; a turbinated Pericarpium obtusely lobed with three oblong melliferous Pores, above its middle; Style persistent and splitting along with the Pericarpium up to its top; several obovate finely wrinkled Seeds inserted below the middle of each cell; a pyramidal Spike of Flowers with long Pedicels, and a single Bracte to each; the type of this Genus is *Scilla Peruviana* L. most absurdly so called, as it is not a *Peruvian* plant, and under this HAWORTH thinks that two species are confounded; in one described by LINK and L'ECLUSE, which I have not seen living, the Bractes are erect, and shorter than the Pedicels; in the other which is accurately figured in the 749th number of the Botanical Magazine, and used to blossom frequently at *Chapel Allerton*, the lowest Bractes are reflexed, green at the Leaves, and much longer than the Pedicels. *Petranthe* differs from *Basaltogeton* in having more elliptic Petals; Filaments concave behind; a cushion-shaped Pericarpium with three round melliferous Pores below its middle; 4 Seeds inserted near the middle of each Cell; and narrow linear-lanceolate Leaves. *Sitocodium* is the only Plant of the Order yet known to exist in *North America*, but very abundant there according to *Mr*. NUTTAL, who discovered it near *Lake Erie* in 1810; he informs us that it grows in alluvial situations over an extent of more than 2000 miles from West to East, but not more than 300 from North to South, if so much; and its Bulbs are a favourite article of diet, among the Aborigines; this enterprising Botanist has referred it to *Phalangium*, but when he finds time to compare it with that Genus again, will probably change his opinion; from the slight undulation of its Petals at their base, joined to the gray colour and shining under surface of its Leaves, it certainly has a look of some *Asphodeleæ*, but is very distant in real affinity, and without any joint to its Pedicels. *Puchsekinia* I have never seen; it was introduced into the garden of the *London* Horticultural Society in 1820, but has not yet flowered. *Monocallis* may be known by its solitary Leaf; I separate it however for more important characters, the Filaments being inserted higher up in the Petals than those of the following Genus; its Style long and linear; and its Bractes are so large that they might almost be termed spathaceous, the lowest generally longer than the Pedicel: this Plant grows plentifully on the South side of the *Tagus*, in similar sandy situations to *Scilla Amœna* L. next to which it must always be placed in a natural series. In that, and *Scilla Sibirica* of HAWORTH, which I join in one Genus by the name of *Othocallis*, the Petals cohere still less than in *Monocallis*, and soon fall off; their Filaments are confluent into a little Saucer, their Style long, and a little thicker towards the top; their Seeds from 5

to 8 in each cell inserted from the bottom to the top; and they have a very short guarded Bracte under each Pedicel, with pretty broad Leaves. *Rinopodium* is so named from the abundance of Honey flowing out of the three Pores at the base of its Pericarpium; this Genus, which HAWORTH has always regarded as quite distinct from every other in *Scilla* of LINNÉ, is characterized by only 2 or at most 3 Leaves never fully developed till the Flowers are fading, which are turned to one side and their Pedicels seldom have any Bractes; its Style contrary to that of *Othocallis* is gradually attenuated, and not so long. *Prospero* agrees with many of the preceding Genera in its stellated Petals, but they have a more evident dorsal callosity; and its Pericarpium is unilocular above the middle, with only two Seeds inserted at the bottom of each Cell, erect and parallel with two flat sides from their juxtaposition, not one higher than the other and globular as in *Comus*: the Peduncle in some Species pushes up before the Leaves, and I believe always from the side of the Bulb; the Bractes are very small, or often deficient towards the top of the Spike; and whether every Species now joined under it ought to remain there, must be determined by comparing living specimens with the type: this is our indigenous Plant, *Scilla Autumnalis* L. which is confined principally to the western counties of *England*. PARKINSON however gathered it in his day on a bank close to the *Thames* near *Chelsea*; I have seen it on *Kew Green* as well as *Moulsey Hurst*, and *Lady* ARCHER formerly pointed it out to me on *Ham Common*; JOHNSON and RAY observed it nearly 200 years ago on *St. Vincent's* Rock, where it is still plentiful close to the east side of the precipice but hardly extends over more than fifty yards of ground, nor have I been able to find it elsewhere about *Bristol*; it grows mixed with *Ophrys spiralis* L. on a sandbank, at the north side of the entrance to *Brading Harbour* in the isle of *Wight*, most luxuriantly, and they must both there be frequently dashed with sea-water, if not actually covered in high Tides; it is also abundant at the *Lizard Point* in *Cornwall*. *Scilla* of DIOSCORIDES, the common officinal Plant of our druggists, certainly belongs rather to this Order than the next, but appears to me the connecting link of both; TOURNEFORT joined it to *Ornithogalum* and is still followed by *Professor* BROTERO, as well as *Mr.* J. B. KER; the latter in the 918th number of the Botanical Magazine, assigns the colour of its Flowers, as his only reason for removing it, "*flores nunquam cærulescentes vel purpurascentes, quo solo suspicor signo, Ornithogalum dignoscendum a Scilla*," which is very extraordinary; for even if colour were to be acknowledged as the only diagnostic of those Genera, this maritime Plant must continue under its ancient name; its Bractes and Pedicels being tinged with a dull violet colour till the former decay, and the outside of its Petals have a greenish violet stripe, which is much stronger in those Bulbs with purple Coats. *Scilla* nevertheless differs essentially from both *Ornithogalum* L. and the other genera akin to that, in its Peduncle appearing before the Leaves on one side, not immediately after they decay; in its Petals withering quite away before the Fruit is ripe; in the strictly perigynous insertion of its Filaments;

and it has the sharply emarginated Anthers, so common in *Hyacintheæ*; in the winged Coat of its Seeds alone it approaches nearer to *Ornithogaleæ*. I have not seen *Ornithogalum Elatum* of Jackson, figured in the 528th number of Andrews' Botanist's Repository, but suspect it may prove a congener of *Scilla*; this was discovered and brought here from the plains near *Alexandria* in *Egypt*, where the Battle was fought in 1801, by J. M. Cripps *Esq.* of *Lewes.*

Ord. 4. Ornithogaleæ.

Petala basi imâ vel paulo altius coalita, varie expansa, in quibusdam nocte vel cœlo nebuloso claudentia, regularia, dorso nunquam gibba etsi interiora nunc in Callum desinant, marcescentia. Filamenta receptaculo petalisve inserta, his breviora, sæpe dilatata, regularia, marcescentia. Antheræ *Rhadamanthi* filamentis confluentes, in cæteris vacillantes, 2-loculares, 4-valves, introrsum dehiscentes. Pericarpium superum, 3-loculare, 3-valve, membranaceum, sinubus septiferis varie melliferum. Stylus admodum varius, aut nullus. Stigma sæpe amplum. Semina numero definita vel indefinita, formâ varia; Tunica nigra, membranacea vel crustacea; Albumen durum vel carnosum; Embryo nunc curvulus; Radicula Hilo versa. *Herbæ ½–5-pedales. Bulbus in aliis parum squamosus. Folia in unâ solitaria, reliquarum multifaria, formâ varia, nunc per totum annum vegeta. Flores albi lutei miniative Vittis* 6 *viridibus, aut fundo discolori, nondum rosei aut cærulei. Spica simplex. Pedunculus medio axillisve foliorum, nunc præcocior vel post marcuerunt nudus, teres, solidus,* 7–150-*florus. Pedicelli in fructu sæpius erecti, raro penitus deficientes. Bracteæ solitariæ.*

Sect. 1. Filamenta receptaculo inserta.

Eustachys. Petala in Stellam nocte dieque expansa, lanceolata, interiora latiora. Filamenta patentia, lanceolato-cuneata, alterna parum latiora. Pericarpium conicum, 3-lobum, basi Poris 3 oblongis melliferum. Stylus brevis, cylindricus. Stigma parvum, 3-lobum. Semina subrotunda, valde rugosa. *Herbæ in* Egypt *arenosis,* 3–4-*pedalis. Bulbus albidus, mole fere Pugni. Folia* 6–7, 1½-*pedalia, læte viridia, late linearia, obtusa, concava, fine veris evanida. Flores intus nivei, erecti, inodori. Spica* 70–150-*flora. Pedunculus medio foliorum emarcidorum, multo longior, crassiusculus. Pedicelli longi. Bracteæ angustæ. Species* 2. Ornithogalum Latifolium, Pyramidale L.

Beryllis. Petala horizontalia, anguste spatulata, fere æqualia. Filamenta patentia, lanceolata cum cuspide, alterna parum latiora. Pericarpium obconicum, retuse 3-lobum, supra basin poris 3 melliferum. Stylus brevis, cylindricus. Stigma 3-lobum. Semina subrotunda, rugosa. *Herbæ in* Languedoc, Dauphiné, *rarissime in* Anglia? 2-*pedales. Bulbus ovatus. Folia* 5–6, *cæsia, lineari-attenuata, fine veris evanida. Flores dilute virides, erecti, nocte dieque expansi. Spica* 25–40-*flora. Pedunculus mox post folia emarcuerunt nudus, longus. Pedicelli* ½-*pollicares. Bracteæ cuneatæ, βηρυλλος gemma viridis. Species* 2. Ornithogalum Pyrenaicum L. Stachyodes Sol.

Ornithogalum J. L. DIOSC. Petala reclinata, lanceolata, sole splendente tantum expansa. Filamenta erecta apice recurvulo, lanceolata cum acumine, alterna vix latiora. Pericarpium obconicum, retuse 3-lobum, supra basin Poris 3 melliferum. Stylus brevis, cylindricus. Stigma mitræforme. Semina ovata, tuberculata. *Herbæ in* Græciâ, Palestine, *et regionibus* Atlantis, 7–10-*pollicares. Bulbus parvus, abunde sobolifer. Folia* 5–7, *viridia cum Vittâ albâ, reclinata, anguste linearia, fine veris marcescentia. Flores intus nivei, erecti, inodori. Spica* 12–18-*flora, corymbosa. Pedunculus medio foliorum adultorun, vix longior; crassiusculus. Pedicelli longi. Bracteæ longæ. Species* 2. O. Umbellatum L. Comosum JACQ.

Brizophile. Petala recurvo-patentia, lanceolata, interiora parum angustiora. Filamenta erecta, obcuneata apice 2-furco. Pericarpium ovatum, retuse 3-lobum, basi poris 3 melliferum. Stylus cylindricus. Stigma 3-lobum. Semina ovata, æquata. *Herba in Ins.* Cretâ, 9–12-*pollicaris. Bulbus abunde sobolifer. Folia* 5–6, *cæsia, late linearia, concava, fine veris marcescentia. Flores intus albidi, cernui, inodori. Spica* 7–10-*flora. Pedunculus medio foliorum, parum longior. Pedicelli breves, in fructu cernui. Bracteæ amplæ, βριζω nuto φιλεω amo. Species* 1. Ornithogalum Nutans. L.

Cathissa. Petala reclinato-patentia, oblonga, apice in unâ erosula, interiora latiora. Pericarpium obconicum, 3-lobum. Stylus gracilis. Stigma angustum, 3-lobum. Semina ungulata, æquata. *Herbæ prope* Lisboa, *in* Espana, *et regionibus* Atlantis, 7–12-*pollicares. Bulbus ovatus. Folia* 1–3, *lineari-attenuata, obtuse mucronata, dorso striata, fine veris evanida. Spica* 5–20-*flora, rariuscula vel densissima. Pedunculus medio foliorum novorum, gracilis. Pedicelli vix ulli. Bracteæ floribus adpressæ. καθιζω sedeo. Species* 2. Scilla Unifolia L. Ornithogalum Concinnum PRODR.

Myanthe. Petala incurvo-patentissima, ovalia, exteriora obtuse mucronata, nocte claudentia. Filamenta cuneata, alterna parum latiora. Pericarpium turbinatum, superne 6-lobum, tenerum, lucens, Stylus gracilis, basi 6-angulus et cum pericarpio dehiscens. Stigma amplum, 3-lobum. Semina angulata, æquata. *Herba in orâ Maris* Mediterranei *præcipue australi, Ins.* Madeirâ, 1½-*pedalis. Bulbus late ovatus. Folia* 5–7, *late linearia, integerrima, fine veris evanida. Flores albi, erecti, odore* Caryophyllorum. *Spica* 11–20-*flora, densa. Pedunculus medio foliorum, crassiusculus. Pedicelli longi. Bracteæ amplæ. μυω claudo. ανθος flos. Species* 1. Ornithogalum Arabicum L.

Aspasia. Petala variè patentia, ovalia, interiora parum angustiora, nocte dieque expansa. Filamenta brevia, alterna latiora basique plus minus 2-aurita. Pericarpium ovatum, 3-lobum, basi poris 3 melliferum. Stylus gracilis vel nullus. Stigma amplum, 3-lobum. Semina angulata, hirta vel tuberculata. *Herbæ in Promontorio* Bonæ Spei, 1–3-*pedales. Bulbus ovatus. Folia* 5–11, *lineari-lanceolata, ciliata, æstate evanida. Flores albi miniative fundo discolori, erecti, inodori. Spica densa,* 12–50-*flora. Pedunculus medio foliorum adultorum, multo longior. Pedicelli longi. Bracteæ amplæ. ασπαζω amplector. Species* 10. Ornithogalum Lacteum, Revolutum, Flavescens JACQ. Aureum CURT. Thyrsoides KER, *aliæque.*

Phæocles. Petala incurvo-horizontalia, ovalia, exteriora disco apicis maculigera. Filamenta brevia, patentia, lineari-attenuata. Stylus brevissimus. Stigma amplum, 3-lobum. Pericarpium et Semina ut in Aspasiâ. *Herbæ in Promontorio* Bonæ Spei, 6–10-*pollicares. Bulbus subrotundus. Folia* 5–6, *lineari-lanceolata, integerrima, concava, æstate evanida. Flores albidi aut flavi, erecti, inodori. Spica* 5–10-*flora, densa. Pedunculus medio foliorum adultorum, paulo longior. Pedicelli breves. Bracteæ amplæ.* φαιος *niger.* κλεος *celebris. Species* 2. Ornithogalum Maculatum Jacq. *aliaque a* Masson *detecta.*

Ardernia. Petala patentissima, oblonga, subæqualia. Filamenta erecta, anguste cuneata, alterna latiora. Pericarpium turbinatum lobis apice retusis. Stylus 3-sulcus, basi crassus. Stigma hemisphæricum. Semina angulata, scabra. *Herba in Promontorio* Bonæ Spei, 10–14-*pollicaris. Bulbus amplus. Folia sublinearia, integerrima, obtuse mucronata, lucida, æstate evanida. Flores fulvi Vittis* 6 *viridibus, erecti, inodori. Spica* 7–14-*flora. Pedunculus medio foliorum, gracilis. Pedicelli recti. Bracteæ breves, John Ardern,* MS[ti] *in Bibl. Sloan. auctor, vixit ad* Newark *medio seculi* 14[mi]. *Species* 1. Ornithogalum Fuscatum Jacq.

Tæniola. Petala reflexa, elliptica, interiora latiora. Filamenta patentia, basi 2-aurita præcipue interiora. Pericarpium conicum, 3-lobum, basi Poris 3 melliferum. Stylus gracilis, longus, cylindricus. Stigma ovale, undique barbatum. Semina compressa, æquata. *Herbæ in Promontorio* Bonæ Spei, 6–8-*pollicaris. Bulbus parvus. Folia* 3–5, *lineari-attenuata, mucronata, æstate evanida. Flores lutei Vittis* 6 *viridibus, cernui, inodori. Spica* 4–7-*flora, rara. Pedunculus* 1–2, *axillis foliorum adultorum, gracilis. Pedicelli longi. Bracteæ angustæ. Species* 1. Albuca Vittata, Ker *in Bot. Mag. No.* 1329.

Osmyne. Petala incurvo-patentia, elliptica, subæqualia. Filamenta erecto-patentia, cuneata, subæqualia. Pericarpium oblongum, apice umbilicatum. Stylus longus, cylindricus. Stigma hemisphæricum. Semina ignota. *Herba in Promontorio* Bonæ Spei 1½-*pedalis. Bulbus late ovatus. Folia* 7–9, *humi fusa, lineari-lanceolata, ciliata, æstate evanida. Flores flavi Vittis* 6 *viridibus, nutantes, suaveolentes. Spica* 7–12-*flora, rariuscula. Pedunculus axillâ foliorum, crassiusculus. Pedicelli longi. Bracteæ breves.* οσμη *odor* υνις *vomer. Species* 1. Ornithogalum Odoratum. Kenn. *in Bot. Rep. No.* 260. *cum Ic.*

Urophyllon. Petala patentissima, elliptica, interiora parum minora. Filamenta brevia, alterna basi 2-aurita et erectiora. Antheræ sero dehiscentes. Pericarpium ovale, supra basin Poris 3 melliferum. Stylus brevis, basi crassior. Stigma hemisphæricum. Semina angulata, æquata. *Herbæ in* Graaf Reyner, Zwart Water Poort, Zechoe Rivier, *rupestribus et truncis arborum,* ½–4-*pedales. Bulbus magnitudine tantum* Avellanæ *vel* Pugni, *supra terram, abunde sobolifer. Folia* 5–10, *sensim attenuata mucrone in alterâ longissimo unde nomen, per totum annum vegeta. Flores albo-virides, erecti, in alterâ odore* Hyacinthi Racemosi L. *Spica* 5–150-*flora, rara densave. Pedunculus* 1–2, *axillaris et foliis longior. Pedicelli breves vel longi.*

Bracteæ angustæ. Species 2. Ornithogalum Niveum. KER. *fig. in Bot. Reg. No.* 285. Caudatum JACQ.

Sect. 2. Filamenta receptaculo petalisque simul inserta.

Branciona. Petala exteriora patentissima; interiora erecta, apice fornicata. Filamenta alterna basi dilatata, omnia antherifera. Pericarpium oblongum, lobis basi 2-dentatis. Stylus obpyramidalis, prismaticus. Stigma truncatum, muricatum. Semina compressa, æquata. *Herba in Promontorio* Bonæ Spei, 2-*pedalis. Bulbus magnitudine* Pugni, *supra terram; Tunicæ squamaceæ, fibris emarcidis foliorum apice setosæ. Folia lorato-attenuata, integerrima, concava, toto anno vegeta. Flores flavi Vittis* 6 *viridibus, erecti, odore succus Padi. Spica* 20–30-*flora, rariuscula. Pedunculus axillaris, foliis longior. Pedicelli longi, recte patentissimi, basi late adnati. Bracteæ ovato-acuminatæ,* JEAN DE BRANCION, *Botanicus* Machliniæ, *et* CLUSIO "*tanquam frater.*" *Species* 1. Albuca Setosa. JACQ.

Falconera. Petala et Filamenta ut in Brancionâ. Pericarpium oblongum, basi 3-quetrum. Stylus obpyramidalis, prismaticus. Stigma truncatum, barbatum. *Herbæ in Promontorio* Bonæ Spei, 1–1½-*pedales. Bulbus ovatus, infra terram. Folia lineari-attenuata, nunc crenulata vel pubescentia, in unâ instar* Droserearum *apice circinata, æstate evanida. Flores albi aut flavi Vittis* 6 *viridibus, erecti vel cernui, inodori. Spica* 5–12-*flora, rariuscula. Pedunculus medio foliorum, paulo longior, erectus. Pedicelli longi, nunc corymbosi. Bracteæ lanceolato-acuminatæ.* JOHN FALCONER, Anglus, DIOSCORIDIS *commentator in* 1553. *Species* 4. Albuca Fastigiata, Viscosa, DRYAND. Spiralis THUNB. *aliaque in Horto Kewensi inedita,* Majori *simillima. Cfr.* Aureum et Caudatum JACQ. *pericarpio abludentes.*

Albuca. J. L. Petala exteriora patentissima; interiora erecta, in Callum super Antheram inflexum desinentia. Filamenta quæ petalis exterioribus opponuntur sterilia. Pericarpium oblongum, apice 6-valve. Stylus obpyramidalis, prismaticus. Stigma truncatum, barbatum. Semina compressa, æquata. *Herbæ prope* Saldanha Bay, Roode Sand, *arenosis,* 1–4-*pedales. Bulbus parvus, rapæformis disco depresso, infra terram. Folia* 3–11, *nunc glauca et ampla, sensim attenuata, raro pubescentia, æstate evanida. Flores albi aut flavi Vittis* 6 *viridibus, cernui, inodori. Spica* 5–40-*flora, rara. Pedunculus medio foliorum, crassiusculus vel gracilis. Pedicelli longi, penduli rective. Bracteæ amplæ. Species* 6. A. Viridiflora, Flaccida, Altissima JACQ. Major, Minor, L. Coarctata DRYAND.

Pallastema. Petala exteriora patentia, interiora erecta et latiora, anguste elliptica. Filamenta æqualia, basi dilatata, 3 resilientia unde nomen. Pericarpium oblongum, apice 6-valve. Stylus gracilis. Stigma 3-lobum. *Herba in* Abyssinia, 3–4-*pedalis. Bulbus late ovatus. Folia* 5–6, *lineari-attenuata, concava, glabra. Flores ochroleuci, nutantes, inodori. Spica* 40 50-*flora, densiuscula. Pedunculus medio foliorum adultorum, paulo longior. Pedicelli brevissimi, fructiferi erecti. Bracteæ lineari-attenuatæ. Species* 1. Albuca Abyssinica JACQ.

Monotassa. Petala patentissima, oblonga, exteriora apice parum

fornicata. Filamenta æqualia, angusta, lineari-attenuata. Pericarpium oblongum, 3-lobum. Stylus longus, filiformis. Stigma hemisphæricum. Semina ignota. *Herba in Promontorio* Bonæ Spei, 7–12-*pollicaris. Bulbus parvus. Flores flavescentes, erecti. Spica 4–7-flora, secunda. Pedunculus ante folia, nudus, gracilis. Pedicelli recti. Bracteæ parvæ. Folia 2–3 lineas lata, sensim attenuata, crenulata. Species* 1. Ornithogalum Secundum JACQ.

Rhadamanthus. Petala fere usque ad medium in Calathum coalita, apice intus pubescentula. Filamenta æqualia, lineari-attenuata, basi confluentia. Antheræ filamento confluentes, superne foramine obcuneato ut in *Kalmia* dehiscentes. Pericarpium tenellum ovatum 3-gonum. Stylus crassiusculus, 3-sulcus. Stigma parum mitræforme. Semina 9–10 in singulis loculis. *Herba in Promontorio* Bonæ Spei, 7–12-*pollicaris. Bulbus ovatus. Flores albidi Vittis* 6 *viridi-purpureis, cernui, inodori. Pedunculus ante folia* Augusto *apud nos, atro-ruber, gracilis, lucidus. Spica* 12–20-*flora, rara. Pedicelli tenues, longi, penduli. Bracteæ minutæ. Folia* 9–11, *angusta, lineari-attenuata, integerrima, canaliculata, carnosa, ῥαδαμνος tener, ανθος flos. Species* 1. Hyacinthus Convallarioides L. *Affinitas dubia, seminibus ignotis.*

Physodia. Petala incurvo-patentissima, lanceolata. Filamenta patentia, clavato-attenuata, inferne pubescentia. Pericarpium ovale, 3-lobum, inflatum. Stylus cylindricus. Stigma parvum, 3-fidum. Semina 2 in singulis loculis fide Jacquinii, oblonga, alata, scabra. *Herba in Promontorio* Bonæ Spei, 7–12-*pollicaris. Bulbus late ovatus. Flores albi dorso rubescentulo, erecti, inodori. Pedunculus ante folia autumno, gracilis. Spica* 30–50-*flora, densa. Pedicelli longi, in fructu penduli. Bracteæ minutæ. Folia* 7–11, *lineari-lanceolata, lucida, planiuscula. Species* 1. Anthericum Physodes JACQ. *Cfr.* Pusillum *ejusdem.*

Drimia JACQ. Petala reclinata vel revoluta, spatulata. Filamenta divergentia vel fasciata, subulata, inter se discreta. Pericarpium stipitatum, obconicum, usque ad infra medium tantum dehiscens, supra basin poris 3 melliferum. Stylus gracilis. Stigma parvum 3-lobum. Semina erecta, compressa, glabra. *Herbæ in Promontorio* Bonæ Spei, ½–3-*pedales. Bulbus parum squamosus, succo acri. Stipulæ* 2–3, *scariosæ isthmis transversis in quibusdam. Flores albidi Fasciis* 6 *viridi-purpureis, suberecti, inodori. Pedunculus ante folia autumno, gracilis, teres. Spica* 30–50-*flora, densa. Pedicelli breves vel longiusculi. Bracteæ parvæ. Folia* 7–12, *lineari-lanceolata vel spatulata, sæpe pubescentia. Species* 6. D. Undulata, Purpurascens, Elata, Ciliaris, Pusilla, Media JACQ. *An huc* Altissima KER *in Bot. Mag. No.* 1074, *qui eandem ac* Ornithogalum Giganteum JACQ. *esse asserit?*

Sypharissa. Petala reclinata, elliptica, alterna latiora. Filamenta patentia, subulata. Pericarpium sessile, ovatum, 3-lobum, basi poris 3 melliferum. Stylus sensim crassior. Stigma parvum 3-lobum. Semina erecta, ovalia, anguste alata. *Herbæ in* Namaquas, 1–1½-*pedales. Bulbus parum squamosus. Stipulæ* 3–5, *imbricatæ, scariosæ isthmis transversis unde Serpentis Exuvias quodam modo refe-*

runt. Folia 3–16, *lineari-attenuata, glabra, carnosa. Pedunculus axillâ foliorum, teres. Spica* 12–27-*flora, densiuscula. Pedicelli breves. Bracteæ scariosæ, basi plus minus auritæ. Species* 3. Anthericum Exuviatum, Filifolium JACQ. Albuca Fugax KER *in Bot. Reg. No.* 311. *cum Ic. bonâ.*

In his Prælectiones, LINNE says of *Ornithogalum,* "*multa cum Allio habet communia, nisi attendas ad Spatham quæ huic deest*;" an affinity which I confess myself unable to perceive; he then adds, "*Scilla et Ornithogalum adeo affines inter se, ut difficile distinguantur solâ latitudine filamentorum*;" and since his death, it has been one of the Opprobria Botanicorum, that no technical character could be found to separate them, except colour, the Flowers of *Ornithogalum* never being blue. When A. L. DE JUSSIEU's work was published in 1789, two of the first Genera which I sought for more information about were these; but they continue just as LINNE left them, in the illustrious *Frenchman's* 4th section of *Asphodeli,* which he defines by "*Flores spicati. Radix bulbosa. Calyx* 6-*partitus, basi staminifer*;" he also observes under *Scilla* L. "*Genus nimium affine sequenti,*" meaning *Ornithogalum,* and removing *Albuca* to the other side of *Scilla*; it is plain therefore, that he had never examined these Plants himself. The next writer upon them *Professor* LINK, after stating the various futile attempts to distinguish *Ornithogalum* from *Scilla,* mentions the side nerves of their Petals, which are pretty strong in the former, but scarcely visible in the latter Genus, adding that if this character should be thought too vague and minute, all that remains to be done is to unite them. In every *Ornithogalum* however, either true or false, which I have examined, the Filaments are hypogynous, and have no more adherence to the Petals, than what is the result of their opposite insertion, so that if a Petal be pulled off, the Filament still remains upon the Receptacle; here therefore we find an easy and tangible character distinguishing these Plants from *Hyacintheæ.* Other Genera however which at present I leave in this order have Filaments completely perigynous; but the firmer substance of their Petals remaining entire after they decay, and fleshy Leaves, either vegetating all the year, or surrounded by scarious stipules, separate them from *Hyacintheæ* very widely. Accordingly I now divide *Ornithogaleæ* into two Sections: in the first with hypogynous Filaments, *Eustachys* resembles *Scilla* in general Habit, sending up a naked Peduncle, but in the center of its Leaves immediately after they wither, not from the side of the Bulb before fresh ones appear; and the Petals continue expanded both day and night. It will be mentioned under *Hæmanthus,* that a Bulb of that Genus from being accidentally wounded, produced a great many others; and soon after this, finding some Bulbs of *Ornithogalum Pyramidale* L. turned up by the men who were digging the Flower borders I divided one horizontally a little above the middle, placing it in a shady part of my Hothouse, as the autumn was far advanced and vegetation ceasing in the open air: about two months afterwards, its outer fleshy Coat was likewise studded with a numerous Progeny, and I believe that all perennial Bulbs, which have thick fleshy Coats,

may be multiplied in the same way. *Beryllis* agrees with *Eustachys* in having Petals which remain expanded both day and night, but they are spatulated, not lanceolate; its Filaments suddenly attenuated at the top, and very nearly, if not quite equal in breadth. *Ornithogalum Umbellatum* L. I think with Rencalme is unquestionably the Plant so called by the *Greeks*, and it has every right to keep that ancient name, the Flowers which only expand during sunshine, being of a dingy colour when closed, not unlike the excrement of some Birds; the Filaments are erect, but a little recurved at their tops; Stigma mitre-shaped; and Seeds rough exactly like a piece of chagrin skin. *Brizophile* has cernuous Flowers on short Pedicels, and they continue so, not turning up when the Pericarpium swells; its Petals are recurved; Filaments broad and bifurcous at the top: in the germination of its Seeds, a fact hitherto I believe unnoticed occurs, though possibly it may be common to some other *Monocotyledones*, when they are all examined; this is the total absence of any Leaf in the Embryo during the first year of its growth, the Cotyledon alone being exceedingly lengthened, sometimes to the extent of 5 or 6 inches, with the Seeds remaining a long time at the top, as in *Cepa*; see *Tab.* ; and if this character is peculiar to *Brizophile*, it will be an additional argument for separating it generically, though sufficiently insulated by others. The Flowers of *Cathissa* are almost quite sessile, forming a Spike in the *Linnean* sense of that term; the first Species *Scilla Unifolia* L. rarely produces more than a single Leaf: the second Species, *Ornithogalum Concinnum* Prodr. which *Mr.* J. Baker has joined to the other in the Botanical Magazine, differs in having constantly from 3 to 5 Leaves, which are very little attenuated, and never end in a long Tail, besides its dense Spike, and guarded Petals: moreover in the 2nd edition of Hortus Kewensis, Dryander has not only again confounded these two Species, but removed them to *Scilla*; this excellent Botanist so seldom erred, that I think it necessary to state, he had formerly seen *Scilla Monophyllos* of Link with blue Flowers, which was introduced by *Dr.* E. W. Gray of the *British Museum*; and not believing that two 1-phyllous Species existed in *Portugal*, as well as deceived by L'Ecluse's figure of *Scilla Unifolia* L. no assurances of mine could persuade him that one was not a white variety of the other; the Filaments of the former however are perigynous but of the latter hypogynous, and the continental Botanists as well as some of our own country know my accuracy in this point. *Myanthe* may be distinguished from several species of *Aspasia* very similar at first sight, by its Petals closing towards the evening and being obtusely mucronated, as well as strongly nerved; its Filaments are likewise gradually attenuated; Style splitting at its base with the valves of the Pericarpium; and its Seeds perfectly smooth; I do not adopt Rencalme's name of *Melanomphale* for this beautiful Plant, because it is full of hard consonants, and that now proposed expresses a still more important character. The remaining Genera of the Order, except *Pallastema*, are indigenous at the *Cape* of *Good Hope*. *Aspasia* is a large and splendid one, immediately known by its flat ciliated Leaves,

and Petals expanding into a Bowl, more or less discoloured at the bottom, very like those of some *Ixias*; the alternate Filaments are dilated below their middle into two ears, and the Stigma is often nearly or quite sessile. *Phæocles* has narrower Leaves, not ciliated, and a dark blotch under the top of its three outer Petals, with narrower Filaments. The Flowers of *Ardernia* are of a dull copper colour with 6 green Stripes, their Peduncle coming up with the Leaves; and it is more especially characterized by a Style so thick at the base as to form a knob upon the Pericarpium; its Seeds are angulated and rough; this Genus is named after *Mr.* JOHN ARDERN, author of a MS. de Re Herbaria, which is preserved in SLOANE'S collection at the *British Museum*; he lived at *Newark* about the middle of the 14th century. *Tæniola* differs from almost every species of the Order in its reflexed Petals, exposing the Filaments and Style, with a very uncommon Stigma shaped like a Pestle. *Osmyne* I have only seen once in the late collection of GEORGE HIBBERT *Esq.* and shall be glad to examine it again; the Leaves are ciliated like those of *Aspasia*, forming a Rose flat on the ground; but it has very different Petals, and wedge-shaped Filaments with a slender cylindrical Style. *Urophyllon* has erect Flowers, elliptic Petals with a green Stripe; its alternate Filaments diverging wider than the three others, and dilated at their base into two ears; Style gradually attenuated; Stigma hemispherical; Seeds angulated and quite smooth; both Species with us continue vegetating during the whole year; whether the excessive droughts of summer where they are indigenous may throw them into a state of rest, I am ignorant, but from their succulent Leaves and Bulbs being formed entirely above ground, this probably is not the case. In the second Section with perigynous Filaments, under *Branciona* I detach one of the 6-androus *Albucas, setosa* of Jacquin; its Bulb approaches to that of *Urophyllon*, but has truncated Coats shaggy at the top from the strong decayed fibres of its Leaves, which continue vegetating all the year; it is so called after an excellent Botanist, JEAN DE BRANCION of *Mechlin*, who was the intimate friend of L'ECLUSE. *Falconera* contains all the other 6-androus *Albucas*, which have erect Flowers, and uniform Petals, though the three inner ones converge over the Anthers, but whether they ought to remain together, must be determined by a more accurate examination; one of them, *Spiralis* of THUNBERG is remarkable for the circination of its Leaves, as in *Drosereæ*. To *Albuca* I only refer those Species which have cernuous Flowers; the three inner Petals terminating in an articulated Callosity over the Anthers, and more or less Kidney-shaped; the three other Filaments opposite to their outer Petals castrated; a small turnip-shaped Bulb never appearing above the surface of the earth; and Leaves decaying all at once in summer. *Pallastema* is so remarkable a Plant, that I am surprized JACQUIN, however averse to the multiplication of Genera, should have referred it to *Albuca*, three of its Filaments flapping back smartly when the inner Petals are moved; it is likewise indigenous in the northern hemisphere of *Africa*; anxious to know exactly where, when cultivating this Genus at

Chapel Allerton, I enquired of BRUCE, sending him a coloured figure of it; he frankly replied that he did not recollect, but if not in *Abyssinia* most probably within the Tropic. *Monotassa* has crenulated Leaves not coming up till its Flowers are past and gone; they have very short Bractes and all turn one way as my name indicates; Petals of a dull yellow tint, and strongly bearded at their points; Filaments narrow and equal; Style long and slender. *Rhadamanthus* is so named from its slender Peduncle and Pedicels; but never having seen the Fruit or ripe Seeds, I am not certain of its immediate affinity, and LINNE referred it to *Hyacinthus*; its Petals are united almost half way up; Anthers converging into a broad line, and only splitting at the Top like those *Kalmia* in *Dicotyledones*; many Seeds are in each cell; Style thick; Stigma somewhat mitre-shaped, and several narrow fleshy Leaves appearing soon after the Peduncle. I am not well acquainted either with *Physodia*; it is however a most distinct Genus, and I formerly believed like JACQUIN that it had some affinity to *Anthericum*; for the Filaments of two Flowers, taken from the identical specimen figured in the Botanical Magazine, were fully as pubescent as that accurate Botanist describes them; but it has a tunicated Bulb, Pedicels without joint, a pendulous inflated Capsule, and according to Jacquin only two winged Seeds in each Cell. The Bulbs of *Drimia* are somewhat scaly, and full of acrid Juice; Pericarpium a little stipitated, not splitting down to its base; Seeds erect, comprest, and smooth; this Genus may be naturally divided into two Sections, in one of which the Leaves are broad, Petals hardly revolute, and Filaments diverging; but in the other, the Leaves are narrow, Petals exceedingly revolute and Filaments approximated into a Bundle. *Sypharissa* has scarious Stipules barred with transverse partitions, not unlike the slough of a Snake; and traces of these are visible in several *Drimias*; the Peduncle comes up with the Leaves or soon after; and the Pericarpium is sessile, containing many winged Seeds. *Mr.* J. B. KER has joined two of the Species to *Albuca*! but he now says in the 311th number of the Botanical Register, that they "*will probably be at some period formed into a separate Genus.*"

Clas. 3. TETRÆ.

The Orders here combined have occasionally a twining Stem or if not the young Shoot is protruded suddenly out of the ground, vegetating rapidly, and seldom woody or perennial. Most of the Genera are hexandrous, and if three of their Filaments are barren or suppressed, they are those opposite to the outer divisions of the floral Envelope, as in the next Class of *Sarmentaceæ*, from which they may be distinguished 1st by having no joint in their Pedicels: 2ndly the æstivation, as LINNE quaintly named it, of their Petals is often peculiar the sides having a disposition to roll inward; or in some Genera they remain nearly in the same position from their earliest infancy till fully grown, and are sometimes so little closed that their other organs of reproduction may be seen in the middle or protruded beyond them: 3rdly their Embryo is situated near or close to the Hilum,

and not at the opposite extremity of the Seed. Their juice is occasionally yellow or red, and in some Genera dreadfully cathartic.

Ord. 1. GETHYLLIDEÆ.

Pericarpium flavescens cum maculis, ellipticum, 3-loculare, carnosum, indehiscens, diu hypogæum. Petala 6 in Tubum gracilem longum fructui maturo adhuc cohærentem coalita; dein in Limbum reclinatum disjuncta, obovato-lanceolata, interiora angustiora; marcescentia. Filamenta ore tubi inserta, basi plus minus dilatata vel crassiora, luxu sæpe dichotoma et biantherigera, brevia, erecto-patentia. Antheræ filamentis confluentes, 2-loculares, 4-valves, longæ, post anthesin plus minus contortæ ut in *Hypoxideis* multis. Stylus 1. Stigma 3-lobum lobis retusis. Semina plurima, magnitudine grani Sinapeos, septis demum pulpâ solutis, 2-plici serie sessilia, compressa; Tunica ochroleuca, Arillo tenuissimo undique obducta; Albumen cito rancidum; Embryo axi albuminis $\frac{1}{3}$ brevior, rectus, inferne clavatus latere prominulo ubi Plumula exit; Radicula Hilo versa. *Herbæ in Promontorio* Bonæ Spei, 7–10-*pollicares. Bulbus ovatus; Tunicis crassis squamaceis. Stipulæ* 1-3, *albidæ maculis parvis purpureis, squamaceæ, scariosæ isthmis transversis. Folia* 7–12, *basi repente in squamas Bulbi transeuntia, anguste linearia, sæpe spiraliter torta et pubescentia, æstate evanida. Flos lacticolor punctis purpureis extus, ante folia nudus, læsus odore vulpino graveolens, in paucis mihi visis* 1-*rius. Pedunculus adeo brevis ut Fructu maturo vix emergat. Bractea a figurâ Horti* Schonbrunensis *adhuc tantum nota, quæ vel una apice* 2-*fida sit, vel* 2 *oppositæ ut in multis* Hypoxideis. Gethyllis L. *est totus Ordo, cujus tres Species certæ innotuerunt,* Spiralis, Ciliaris et Villosa.

The evident similitude of *Gethyllis* to *Sypharissa* in its Bulb, Stipules, and Leaves, induces me with our present knowledge of *Monocotyledones*, to make these Genera connect the Classes of *Coronariæ* and *Tetræ*; and though not yet sufficiently acquainted with the Inflorescence and Bractes of the former, which are only to be understood by dissecting the Bulb, so far from agreeing with *Mr.* R. BROWN respecting its affinity, I do not refer it even to the same Class; but if it does belong to *Spathaceæ*, the remark in his Prodromus p. 290, "*ad sectionem secundam Amaryllidearum transferri debet,*" is quite unaccountable; for he defines that by "*Radix fibrosa. Flores subspicati vel corymbosi*;" placing *Doryanthes* there, which certainly has no relationship to *Gethyllis*; and the description of its Seeds does little credit to so great a carpologist, his outer Coat only adhering round the Hilum, and being a true Arillus of *Richard*, analogous to that of *Passifloreæ*, except in totally covering their real Coat, like a fine film. *Gethyllis* must therefore according to my judgment remain next to *Hypoxideæ*, with several of which it agrees in the tendency of its Petals to roll in on one side towards the top, and more especially in its short Filaments; long Anthers, their rachis confluent with the Filament, twisted after bursting; and coarse Pollen. The Fruit of *Gethyllis Ciliaris* is an inch in diameter by three long, fragrant like that of the other Species, and thought

delicious to eat by some people, ripening so well upon an imported Bulb during its voyage from the *Cape* of *Good Hope*, as to have been tasted here in great perfection. The additional number of Anthers in this and *Villosa*, appears to be a constant and natural luxuriance; the last time indeed that *Ciliaris* blossomed at *Chapel Allerton*, they were reduced to the usual complement of six, but its Bulb had been dwindling several years, and two or three of the Filaments were always dichotomous before, with a complete Anther or sometimes only half an Anther on each branch.

Ord. 2. HYPOXIDEÆ R. BR.

Pericarpium inferum parumve superum, 1–3-loculare; membranaceum et lateribus irregulariter rumpens, vel succulentum et clausum. Petala 6, disco pericarpium cingente vel coronante inserta, nunc in Tubum longissimum coalita, in cunis imbricata, dum post explicationem clauduntur marginibus involuta, extus viridia, marcescentia. Filamenta 6, disco petalisve inserta, marcescentia. Antheræ filamento confluentes, aut vacillantes, extrorsum dehiscentes. Stylus 1. Stigmata 3, coalita vel discreta, sæpe sagittata. Semina numero indefinita, Placentis 3 e pariete stipitatis centro sæpe confluentibus plus minus funiculata, subrotunda, in aliis Funiculo arillato vel instar Tunicæ nigrescente rostellata; Tunica nigra, crustacea; Albumen carnosum; Embryo axilis; Radicula plus minus ad latus Hilo sub Micropyla. *Herbæ 5–12-pollicares. Radix multiceps, carnosa et perennis succo flavo; vel bulbosa Tunicis basi in marginem erosum dilatatis, et e gemmis prioris vix exsuccæ quotannis nascens. Folia sessilia, imbricata, in multis 3-faria, lineari-attenuata vel lanceolata, nunc plicata, sæpe pubescentia, toto anno vegeta aut æstate evanida. Flores sæpius lutei, erecti, 1-rii vel laxe paniculati, in plurimis sole splendente tantum expansi. Pedunculi axillis interioribus 1-rii. Pedicelli breves longive, infimi sæpe oppositi. Bracteæ 1-riæ, vel 2 oppositæ, breves et setaceæ, vel longissimæ et vaginantes.*

Sect. 1. Pericarpium succulentum, non dehiscens.

Curculigo GÆRTN. Leucoium LOUR. Petala in Tubum brevem longissimumve, fructui hærentem coalita; dein in Limbum diu ante tubum evanidum disjuncta, oblonga; tota vero simul marcescentia. Filamenta ore tubi inserta. Antheræ filamento confluentes. Stylus tubo accretus. Stigma mitræforme. Semina rostellata. *Herbæ in* Hindostan, Cochin, et New Holland, *5–10-pollicares. Radix carnosa, multiceps, perennis. Stipulæ foliaceæ. Folia multifaria, lanceolata, plicata, toto anno vegeta. Flores lutei, erecti vel nutantes, masculi hermaphroditique in aliis, tarde prodeuntes, inodori. Panicula fasciformis. Pedunculus* 1 *axillis* 2–3 *exterioribus, nunc brevissimus et fere totus hypogæus. Bracteæ 1-riæ, lineari-lanceolatæ, foliaceæ. Species* 4. C. Orchioides GÆRTN., KER *in Bot. Mag. No.* 1076. Brevifolia, Latifolia, DRYAND. Ensifolia R. BR. *An harum vere congener* Recurvata DRYAND.?

Empodium. Petala et Stamina *Curculigonis.* Stylus tubo discretus. Stigma 3-partitum. Semina reniformia. *Herbæ in Promontorio*

Bonæ Spei *sabulosis, 5–9-pollicares. Bulbus albidus, subrotundus fere* Sparaxidis, *basi fibras agens, annuus. Stipulæ 2–3, vaginantes, apice parum cuneatæ. Folia 4–6, multifaria, lineari-lanceolata, plicata. Flores lutei dorso virente, 1–3 in axillis exterioribus, omnes hermaphroditi, erecti, sole splendente tantum expansi, suaveolentes. Pedunculi triquetri, fere toti hypogæi. Bracteæ ignotæ.* εν *in* πους *pes. Species* 2. Gethyllis Plicata JACQ. Curculigo Plicata β. KER *in Bot. Reg. No.* 345.

Sect. 2. Pericarpium crustaceum, varie rumpens.

Ianthe. Pericarpium nonnihil superum, 1-loculare Placentis amplis, disco apicem cingente horizontaliter ruptum. Petala ovato-lanceolata. Filamenta disco inserta. Antheræ filamentis confluentes. Stylus brevissimus. Stigmata sagittata, tota libera. Semina undique imbricata, exquisite funiculata. *Herbæ in Promontorio* Bonæ Spei, *5–8-pollicares. Bulbus parvus, complanatus, margine basis eroso ut in* Hesperantho, *disco vetusti annuus. Stipulæ nullæ. Folia 9–13, multifaria, lineari-attenuata, nunc Vittâ albâ per medium, sæpe crenulata, carinata. Flores lutei dorso virente, axillis 1-rii, erecti, sole splendente tantum expansi, inodori. Pedunculi graciles, teretes vel compressi, fistulosi, ultra Bracteas in fructu reclinati. Bracteæ 1-riæ, vel 2 oppositæ, infra medium pedunculi, lineari-attenuatæ.* ιαινω *læte floreo. Species* 3. Hypoxis ovata, Serrata L. Linearis RENN. *aliæque. An huc* Alba JACQ. *Collect.* 4. *p.* 135. *t.* 2. *f.* 1.

Spiloxene. Pericarpium totum inferum, 3-loculare Placentis latis, lateribus rumpens. Petala lanceolato-cuneata, nunc 2-pollicaria. Filamenta, Antheræ et Stylus Ianthis. Stigmata 3, sagittata, plus minus coalita. Semina multis seriebus imbricata, sessilia. *Herbæ infra* Duyvelsberg, *in* Zwartland, Groen Kloof *campis sabulosis, pedales vel plus. Bulbus* Ianthis. *Stipulæ nullæ. Folia 10–14, multifaria, humifusa, lineari-attenuata, carinata. Flores albi luteive maculis 6 ad basin, axillâ 1 alterâve foliorum interiorum 1-rii, erecti, sole splendente tantum expansi, inodori. Pedunculi crassiusculi, 6-anguli, fistulosi. Bractea 1 supra basin pedunculi, longissima, fere tota vaginans.* σπιλος *macula* ξενος *hospes. Species* 2. Hypoxis Stellata L. maculis petalorum intra marginem desinentibus, placentis convexis; *Pavonina* MS. quæ Stellata β. KER, maculis petalorum marginem operientibus, placentis retusis. *Aliud proximum ni fallor Genus constat* Hypoxis Aquatica L. *cujus Flores polygami.*

Hypoxis. J. L. RENCALM *nom. ad* Gageæ *speciem.* Pericarpium totum inferum, 3-loculare Placentis angustis, lateribus ruptum. Petala oblonga vel lanceolata. Filamenta margine disci petalisque simul inserta. Antheræ vacillantes. Stylus crassus. Stigma mitræforme. *Herbæ in Promontorio* Bonæ Spei, Novâ Hollandiâ, *Ins.* Jamaica, *et a* Floridâ ad Pensylvaniam, *7–10-pollicares. Radix carnosa, multiceps perennis succo flavo. Stipulæ nullæ. Folia numerosa, 3-faria, lineari-attenuata* Caricum, *villosa, acute carinata, toto anno vegeta. Flores extus virides, intus lutei, erecti, nocte dieque expansi. Panicula 1–11-flora, laxa. Pedunculi axillis interioribus 1-rii, foliis breviores, graciles, compressi, solidi, tenaces, villosi.*

Pedicelli infimi fere semper oppositi, inde 2-chotomi vel alterni. Bracteæ 1-riæ ad singulos pedicellos, lineari-attenuatæ. Species 11. H. Villosa THUNB. Obliqua Sobolifera JACQ. Obtusa BURCH. Pratensis, Hygrometrica, Marginata, Glabella R. BR. Erecta, Decumbens L. Juncea SM.

The Seeds of all *Hypoxideæ* yet discovered have a black shining brittle Coat, for which *Mr.* R. BROWN in his Prodromus annexed them to *Asphodeleæ*. This character alone however is of little ordinal value, differing exceedingly in many Genera very nearly allied, *Bryonia* and *Cucumis, Ricinus* and *Jatropha, Euryspermum* and *Leneadendron, Myrtus* and *Eugenia, Epilobium* and *Fuchsia, Eurya* and *Thea, Hymenocallis* and *Pancratium, Canna* and *Maranta,* are familiar instances. The Funiculus of their Seeds either arillated or indurated as in some *Lachenaleæ* affords a more decisive character, and joined to their Pericarpium inferum, succulent, or when crustaceous not splitting into regular Valves, axillary Inflorescence, with Petals which have almost always a green outside, and are rolled in laterally when they close after expansion, long ago determined me to separate them as an Order; which *Mr.* R. BROWN now admits in the 2nd volume of FLINDERS' voyage, *p.* 277. His character however is not only incomplete, their organs of vegetation being entirely left out, but erroneous in two material points; for the Filaments are not always "*imis laciniis inserta,*" nor is the ovarium constantly "3-*locular,*" as there stated. *Hypoxideæ* appear to me related to *Cyanelleæ* and *Hæmodoreæ,* several of them agreeing with the former in their bulbous Roots formed annually upon the old one as that wastes away, and these have long attenuated Leaves often crenulated; while in others the Roots are perennial, full of yellow Juice, and their Leaves often plicated. The Fruit of *Curculigo* in the first Section has been greatly misunderstood by GÆRTNER, and *Mr.* J. B. KER describing it in the Botanical Magazine of *Jan.* 1808, remarks "*Gethyllidi peraffine Genus*;" nevertheless in the Botanical Register of *Feb.* 1819, after copying *Mr.* R. BROWN's character and observations respecting *Curculigo,* he adopts that Botanist's contrary opinion, and there joins two Species, which grow wild at the *Cape* of *Good Hope.* The material difference however in the bulbous root of these, Leaves decaying all at once towards summer, Inflorescence without any Bractes above ground, Petals only expanding during sunshine, and Seeds hardly beaked, in my opinion warrant their separation as a distinct Genus, for which their immersed Fruits have suggested the name of *Empodium*; and their immediate affinity to *Gethyllis* is corroborated by a Flower of *Curculigo Plicata β* now blossoming in *Mr.* GRIFFIN's collection, in which two of its Filaments are dichotomous with a perfect Anther upon each branch, exactly as in that Genus. In the second Section with a dry crustaceous Pericarpium, *Ianthe* has an annual Bulb, dilated at the base into a jagged margin like that of Hesperanthus; its Leaves are attenuated, in one Species striped with white down the middle; Pericarpium 1-locular from the earliest period; internal surface of Petals yellow without a large spot at their base; Filaments inserted on the recep-

tacular disc as close as possible to the Style and perfectly distinct from the Petals; Rachis of Anthers confluent with the Filament; Stigmata united; and its Seeds are inserted by comparatively long Funiculi all over the surface of three very large bolstered parietal Placentas; see *Tab. . fig.* . *Spiloxene,* so named from the dark spot at the base of its Petals, agrees with *Ianthe* in its Root, but has longer and more attenuated Leaves, more or less scarious and crenulated at the edge; its Flowers are very large, solitary and seldom in more than one or two of the inner axils; Peduncle fistular with a long sheathing foliaceous Bracte towards the bottom; Pericarpium 3-locular, but as it ripens the partitions which are very thin nearly vanish, and the center of the Placentas becomes hollow: Petals only expanded during sunshine; Filaments inserted in two series on the disc of the Pericarpium, and nearer to the Style than to the Petals; midrib of Anthers an uninterrupted continuation of the Filament; Stigmata united nearly up to the top; and Seeds inserted in many rows. Lastly, to *Hypoxis* I only refer those Species, which agree with LINNÉ's type, *Erecta,* in having perennial Roots full of yellow or orange coloured juice; Leaves continuing to vegetate nearly through the whole year, and never decaying all at the same time, 3-farious, generally pubescent, sharply keeled, not unlike those of *Carex*; slender tough angulated solid Peduncles; panicled or solitary Flowers, the two lowest generally opposite; a small Bracte at the base of each Pedicel; Petals of one yellow colour internally; Filaments inserted conjointly in the marginal disc of the Pericarpium and base of the Petals; Anthers pivotantes or nearly so, as the *French* well express this sort of insertion, their midrib far broader than the top of the Filaments, not confluent; Seeds only in two series on narrow Placentas; if all the Species mentioned under the Generic Character are legitimate congeners, this is rather a large Genus.

Ord. 3. CYANELLEÆ.

Pericarpium parum inferum, membranaceum nervis reticulatis 3-loculare, parte supera 3-valve. Petala 6, margine pericarpii inserta, basi coalita, oblonga, apice mucronulata, plus minus irregularia, post florescentiam conniventia, tandem detrusa. Filamenta 6, petalis juxta basin inserta et breviora, varie irregularia. Antheræ 2-loculares, filamentis confluentes, poris 2 terminalibus Pollen ejicientes, unâ nunc maximâ. Stylus reclinatus. Stigma 3-fidum. Semina 7–13 in singulis loculis, marginibus septorum subsessilia, obovata; Tunica nigra, crustacea; Albumen durum; Embryo ad Hilum. *Herbæ in Promontorio* Bonæ Spei. *Radix bulbosa, magnitudine* Avellanæ, *sphærica; Tunicæ duræ, reticulatæ; novâ disco vetustæ mox periturœ quotannis innascente. Caulis sub terrâ nunc scapiformis ut in* Galaxiâ. *Folia sæpe omnia juxta terram, multifaria, anguste linearia vel lanceolata, dura, nunc setulis scabra. Flores nutantes, inodori. Panicula rariuscula, terminalis, nunc parum spicata. Pedicelli longi vel breves, graciles. Bracteæ* 1–2, *ad ramos pedicellosque, squamaceæ.*

Trigella. Petala valde irregularia; exteriorum 2 superiora recurva,

1 infimum dependens; 3 interiora in Ungues attenuata. Filamenta 2 phalangibus æqualibus sursum deorsumque approximata. Antheræ æquales. *Caulis* $1\frac{1}{2}$*-pedalis, crassiusculus, angulatus. Folia glauca, inter se remotiora quam affinium, lanceolata, crenulata. Flores purpurei. Spica paniculata ramis brevibus. Pedicelli breves. Nomen a Trigâ stamineâ. Species* 1. Cyanella Orchidiformis. JACQ.

Pharetrella. Petala parum irregularia, ovato-lanceolata. Filamenta vix coalita, 5 sursum 1 deorsum flexa. Antheræ æquales. Herba pedalis. *Caulis sub terrâ gracillimus. Folium infimum stipulaceum, pharetræforme, reliqua conferta excipiens; hæc angustissima, recurva, linearia, basi vaginante et scariosa, dura. Flores albi cum rubore extus. Panicula coarctata, Pedicellis longissimis fasciculum mentientibus intra stipulam. Species* 1. Cyanella Alba L.

Cyanella. J. L. VAN ROYEN. Petala parum irregularia, obovato-lanceolata. Filamenta in Vaginam obliquam coalita. Anthera infima maxima, a cæteris deflexa. *Caulis gracilis, 1–2-pedalis. Folia plura, juxta basin caulis approximata, lineari-lanceolata, margine et dorso sæpe scabra, parum undulata. Flores carnei, albi, vel flavi. Pedunculus gracilis, squamulis minutissimis aspersus. Panicula rariuscula, ramis spicatis. Pedicelli longi, sursum arcuati. Species* 3. C. capensis, Lutea, L. *aliaque inedita.*

I cannot see any affinity in these Plants to *Scilla* and *Ornithogalum,* with which LINNÉ, and A. L. DE JUSSIEU have joined them. Their Radication is totally discordant, the Bulb decaying annually as a new one is forming upon it, the Fibres of which issue from its upper part; and their Pericarpium is always partly inferum as in *Hypoxideæ,* which they serve to connect more gradually with *Hæmodoreæ.* The Order at present may be characterized solely by its Anthers, to which however there is an approach in those *Hypoxideæ,* where the midrib of the Anther is very broad and continuous with the Filament. LINNÉ adopted the name of *Cyanella* by the suggestion of VAN ROYEN, as DRYANDER informed me, not on account of the colour of its Flowers, which I believe are never blue, but from a fancied resemblance in them to the outer Flowers of TOURNEFORT's *Cyanus* our *English* Corn-flower. GÆRTNER's description and figures of the Fruit are not quite correct; for he makes it completely superum; but that of every species I have examined was somewhat inferum, and contained from 7 to 15 Seeds in each cell, though many of them were abortive.

Ord. 4. HÆMODOREÆ. Junci J. *sect.* 3.

Pericarpium superum inferumve, 3-loculare, varie dehiscens aut evalve, nunc tria basi coalita. Petala 6, receptaculo sæpe pericarpium circumdante inserta, nunc in Tubum coalita, in cunis imbricata vel modo contigua, rarius irregularia, nunquam mellifera, marcescentia. Nectaria varia, receptaculo sinubusve pericarpii insidentia. Filamenta 3–12, receptaculo petalisve inserta, dum modo 3 interioribus opposita, marcescentia. Antheræ introrsum dehiscentes valvis incurvis. Stylus 1–3, deciduus vel cum pericarpio dehiscens. Stigma simplex 3-lobumve. Semina numero definita vel indefinita, Placentâ septis confluente et nunc latâ sessilia vel funiculata, erecta pendulave,

figurâ admodum diversa; Tunica colore varia, membranacea vel crustacea, nunc hirsuta; Albumen carnosum; Embryo ad Hilum vel parum remotus. *Herbæ ½–3-pedales. Radix multiceps et perennis; vel rarius tuberosa et e gemmis prioris quotannis nascens; succo sæpe flavo rubrove. Folia fere constanter 2-faria et ensata, nunc plicata, toto anno vegeta vel æstate evanida. Flores albi flavi purpurei viridesve, erecti, nunc 1-laterales, spicati paniculative. Pedunculus medio foliorum terminalis, ramis teneris nunc circinatis. Pedicelli breves. Bracteæ 1–2 ad singulos ramos et pedicellos, vel sparsæ.*

Sect. 1. Semina numerosa, sessilia; Tunicâ nigrâ crustaceâ tuberculatâ.

Xiphidium J. L. LOEFL.

Sect. 2. Semina 1–6 in singulis loculis, sessilia; Tunicâ atro-rubrâ vel nigrâ, membranaceâ, æquatâ vel hirsutâ.

Wachendorfia J. L. BURM.
Dilatris. J. L. BERG.
Argolasia J. Lanaria SOLAND.
Gyrotheca. HORT. TR. Heritiera GMEL.
Hæmodorum SM.
Phleboear. R. BR.

Sect. 3. Semina numerosa, sessilia vel funiculata; Tunicâ albidâ vel fuscâ, membranaceâ, striatâ.

Conostylis R. BR.
Anigosia MS. Anigozanthus LABILL.
Lophiola KER. *in Bot. Mag. No.* 1596.
Aletris J. L.
Pleea MICH*.
Narthecium J. MOCHR.
Tofieldia HUDS. Anthericum L. *Hort. Cliff.*

A. L. DE JUSSIEU in his Genera Plantarum inserts these Plants at the end of *Irideæ*, observing that they will hereafter constitute an Order, which may be divided into two Sections from their Pericarpium superum, or inferum; and *Mr.* R. BROWN in his Prodromus, without quoting him, proposes to call them *Hemodoraceæ*, there adding several Genera of *New Holland*, while he doubts about *Xiphidium*, not having seen its Seeds. I do not here exactly follow either of these great Botanists, making the absence of any melliferous Gland in the Petals, which they do not mention, the most essential character of the Order, and dividing it into Sections from the Structure rather than number of its Seeds. These differ exceedingly in colour and shape, being whitish brown or black, and almost linear, obovate or peltated; they are however always inserted on a central Placenta confluent with the dissepiments, and this from being very broad in the Genera which connect *Hypoxideæ* and *Cyanelleæ* becomes gradually narrower in those approaching to *Veratreæ*. *Xiphidium* has been hitherto incorrectly described; for two of its Petals are somewhat ear-shaped and not quite regular with a yellow spot at their

base; its 3 Filaments are inserted in the Receptacle distinct from the Petals, and have attenuated margins; Style reclined as in *Wachendorfia*; Stigma 3-lobed; Seeds numerous, quite sessile on a broad spongy Placenta, pendulous, oval, with a black shining chagrined Coat, and papillary Chalaza, which after the Seed is detached from its Placenta looks like an Hilum; they are therefore very similar to those of *Hypoxideæ*, but have no Funiculus, and their Hilum is so small as not to be easily detected after they ripen, till by a longitudinal Section, their minute Embryo appears immediately under it, see *Tab. fig.* *Wachendorfia* differs from every Genus I have yet seen in its Nectaries, about which LINNÉ was quite mistaken; they are two oblong Glands placed externally at the base of the Pericarpium, between the 3 upper and 3 lower Petals, extended down the Pedicel in some species to a considerable distance like two Spurs; its Filaments are inserted in the Receptacle opposite to the inner Petals, but the upper margin of the two lateral Filaments runs up into the disc of the middle outer Petal, and being there confluent with it forms a sort of Groove, thus in a certain degree impugning the general Law, which in this Order attaches the Filaments, if only three in number, either to the inner Petals, or to that part of the Receptacle opposite to them. *Dilatris* is known at once by its regular Petals, and Capsule not splitting in the middle of each cell, but close to the dissepiments. *Argolasia* introduces several Genera with a very woolly Corolla, and is 6-androus; its Anthers inserted in a little cavity, and sagittate; Pericarpium a third part superum; with two large black, erect, obovate shining Seeds, sessile on a central Placenta at the bottom of each cell. *Gyrotheca* on the contrary is 3-androus, and referred to *Dilatris* by NUTTAL; but I cannot follow that candid Botanist in this combination, the nonconformity of both its male and female Organs, which he passes over unnoticed, being far too great to say nothing of its locality in *North America*: for every species of *Dilatris* has regular Petals; reniform Anthers inserted in a little cavity at their base, pivotantes of the *French*; and a Capsule splitting at the edge of the Cells close to the dissepiments; while *Gyrotheca* has irregular Petals; very long revolute Anthers, the rachis of which is joined to the Filament by a broad base, so as to be nearly confluent; and a Capsule splitting in the middle of the Cells. RICHARD also, if he be the author of the Generic characters in MICHAUX's Flora Boreali-Americana, as is reported, admits this Plant to be sui Generis. *Mr.* R. BROWN describes the next Genus *Hæmodorum* with "*Perianthium superum, et Capsula semisupera*"; but in two Species which I have examined living, precisely the contrary change of situation occurs, their Petals (his Perianthium) being nearly infera at first, and not elevated by the Pericarpium, till that begins to swell in consequence of fœcundation. *Phlebocar* I have never seen; he describes its Ovarium 1-locular with 3 Seeds, one of which only ripens. *Conostylis* differs from *Anigosia* in its dense corymbose Inflorescence, regular Corolla, and wide pyramidal Style, splitting with the Pericarpium into as many Valves as that. In *Anigosia*, the Corolla becomes funnel-

shaped with an irregular Limb, and being quite of a green colour, not yellow, in living Plants, I have shortened Labillardière's sesquipedalian name. *Mr.* Pursh in his work joins *Lophiola* to *Araolaria*, but it has a Corolla woolly on both surfaces, and widely different Seeds, indefinite in number and alveolated. *Aletris* is the only Genus which has gradually attenuated concave Leaves like those of *Helonias*, and I therefore place it here with some reluctance; but its Corolla is urceolate, as well as staminiferous, and its pubescence agrees. *Pleca* is remarkable for its additional Stamina, generally 9, but sometimes encreased to 12, or reduced to the natural number of 6; its Petals are white and spread out into a star; *Dr.* Sims thinks this Genus more closely allied to *Scheuchzeria*! *Narthecium* is beautifully characterized by its woolly Filaments, the valves of its Capsule splitting dorsally as well as at the axis, and the Coat of its Seeds spirally striated: I have seldom met with this Plant in abundance during the autumn, without flushing *Tetrao Tetrix* L. our *Black Game*, among it; this both in the low grounds near *Kidbrook* in *Sussex*, and on the high mountains above *Halifax* in *Yorkshire*; so that I conjecture these Birds may feed upon its Seeds, which would easily be ascertained by examining the craw of one shot at such places in that season. *Tofieldia*, the original *Anthericum* of Linné has a Pericarpium more or less deeply divided, and generally distinct Styles; the Nectaries of this Genus however being in the sinuses at the base of the Pericarpium leave no doubt of its belonging to this Order, with which it corresponds in Habit; and as there is an insensible gradation from trinity to unity in the Fruits of different Species I do not yet admit *Triantha* of Nuttal; but only having seen dried specimens, it may be a legitimate Genus, as well as other Species now referred to *Tofieldia*, their Seeds differing not less than their Capsules, from having no tail whatever like those of *Aletris*, to a very long one, like those of *Narthecium*.

Ord. 5. Veratreæ. Junci J. *sect.* 4.

Petala 6, receptaculo nunc basin pericarpii circumdante inserta, inter se discreta, sæpe unguiculata, regularia, varie mellifera in cunis imbricata lateribus nunquam involutis, marcescentia. Filamenta 6, receptaculo petalisve inserta, marcescentia. Antheræ versus petala lateribusve dehiscentes, Valvis sæpius incurvis, in multis cito deciduæ. Pericarpium 1 vel 3 plus minus coalita, fere constanter supera, varie dehiscentia. Stylus 1 vel sæpius 3, decidui vel persistentes. Stigma simplex vel 3-fidum. Semina numero definita vel indefinita, insertione et structurâ varia; Tunica albida badiave, membranacea vel carnosa; Albumen carnosum; Embryo brevis longusve, axilis. *Herbæ in* Americâ Boreali, Europâ et Sibiriâ, $\frac{1}{2}$–6-*pedales. Radix multiceps, vel bulbosa Tunicis membranaceis, perennis. Folia pleraque radicalia, angustissima, multifaria, concava vel plicata, hactenus non ensata, toto anno vegeta aut hyeme evanida. Flores albidi virides atropurpureive, erecti. Spica simplex vel paniculata, raro* 1-*flora, terminalis. Pedunculus caule continuatus. Bracteæ ad ramos pedicellosque* 1-*riæ.*

Sect. 1. Styli 3. Flores spicâ simplici.

Chitonia. In orâ occidentali Americæ Borealis.
Xerophyllum, RICHD. Helonias Asphodeloides, L. Tenax, *Pursh.*
Dasurus. Veratrum Luteum, L. *Genus dioicum.*
Helonias, J. L.
Endocles. Melanthium Lætum. SOLAND.

Sect. 2. Styli 3. Flores spicâ paniculati.

Nolina, RICH.
Zigadenus, RICH.
Monadenus. Ex Americâ Boreali. *Pericarpium parum inferum.*
Melanthium, J. L.
Veratrum, J. L.

Sect. 3. Stylus 1. Flores 1-rii vel rarissime 2. Must go to Bulbocodeæ having a true Bulb prominent in one side like Colchicum.

Lloydia. Anthericum Serotinum L.

Here I combine a number of Genera, which agree in having their Petals flatly imbricated before they expand, variously melliferous towards the base, almost constantly 3 Styles; and often nearly distinct Fruits, the lobes only cohering at their base. Their Roots in some consist of many yellow or black strong Fibres issuing from the base of their Stems which are gemmiparous under ground; in others of a tunicated perennial Bulb. *Chitonia* was discovered by *Mr.* ARCHIBALD MENZIES on the *West* Coast of *North America*, and is so named from the numerous Coats of its Bulb; its Petals are attenuated into a staminiferous horizontal Claw; Filaments broad; Styles broad at their base; Capsule 3-lobed, splitting dorsally into 6 valves; Seeds numerous, fleshy, oblong, somewhat angulated without any wing or tail; Flowers in a dense terminal Spike. *Xerophyllum* of RICHARD is next easily characterized by its deciduous Styles, and only 2 Seeds in each Cell of the Capsule. *Dasurus* has very broad Filaments like *Xerophyllum* but is a dioicous Genus with habit of *Melanthium*, and its Seeds are winged; its Pericarpium splits dorsally. In *Helonias* the Pericarpium also splits dorsally, and is deeply lobed; but besides its peculiar Habit, the Seeds resemble those of *Narthecium* except that they are not spirally striated, being attached to the front of a long Funiculus which terminates beyond them in a long Tail. *Endocles* is so called from the lobes of its Pericarpium only splitting internally, not dorsally; they are very prominent as in *Ochna*, and the Styles at last deciduous; each lobe contains from 3 to 5 Seeds, obovate, fleshy, and without any wing or tail. *Nolina* I know very little of; it is said to have a tunicated bulbous Root. The Filaments of *Zigadenus* are inserted in the Receptacle, and if a Fruit given to me by *Professor* PECK really belongs to this Plant, it is partly inferum, has persistent Styles, and caudated Seeds. *Monadenus* is a very elegant Plant, sending up a large Panicle 3 feet high of fine slender branches; Flowers yellowish with a purple tinge, all turned one way upwards; Pericarpium only semisuperum, below the Petals 6-angular, above them 3-angular; Petals wedge-

shaped, narrowed into a short Claw which has one melliferous semicircular cavity at its very base, the 3 inner ones rather smaller; Filaments inserted in the receptacular margin of the Pericarpium, and there a little dilated; 3 Styles recurved from their base; Seeds indefinite in number, but I have not seen them ripe; this Genus, which at first sight I took for a *Diasia*, is I believe yet only in LEE's nursery at *Hammersmith*, where it is planted in one of the *American* borders near the last built Range of Glass. *Melanthium* was established by LINNÉ, in the first volume of Amœnitates Academicæ, from *Sibiricum* and *Virginicum*; its Filaments are inserted in the claws of the Petals above their base; its Styles are divaricated and persistent; its Pericarpium only splits at the axis; and its Seeds although not many are indefinite in number. *Veratrum*, which to my surprise, NUTTAL thinks with *Mr.* J. B. KER ought to be joined under *Melanthium*, differs totally in Habit, Inflorescence, and most essentially in the insertion of its Filaments on the Receptacle; moreover its Nectaries are quite contiguous, not distinct, and it is decidedly a more polygamous Genus; when DRYANDER read the observations upon it in the 935th No. of the Botanical Magazine, he said to me, "*Ker forgets Characterem fluere e Genere, non Genus e Charactere.*" Forty years have elapsed, since I gathered a living Flower of *Anthericum Serotinum* L. on *Mount Snowdon*, but I have an impression left that its Petals are melliferous; its Filaments as far as can be ascertained by the dried specimen are ambigue perigyna, being attached equally to the Receptacle and base of the Petals; its Style is simple; Stigma mitre-shaped; but its Fruit and Seeds, which will more certainly determine its real affinity, are unknown to me; the latter are numerous in each Cell; the Root is bulbous, and prominent on one side at the base; the husky bases of its decayed Leaves continue for many years: it is named after EDWARD LLOYD *Esq.*, who communcated many rare Plants to RAY, and was the author of the Catalogue of Plants in *Wales*, in *Bishop* GIBSON's edition of CAMDEN's Britannia.

Ord. 6. BULBOCODEÆ. Colchicaceæ, DE CAND.

Petala 6, sessilia unguiculata, nunc in Tubum approximata vel coalita, regularia, pone Filamenta mellifera, in cunis imbricata lateribus non involutis, marcescentia sed in pluribus mox evanida. Filamenta 6, receptaculo vel apice unguium inserta, quæ petalis exterioribus opponuntur breviora, regularia. Antheræ vacillantes, quasi thecâ insertæ; Valvis post anthesin reflexis. Pericarpium superum, apice plus minus 3-lobum, axi tantum dorsove loculorum dehiscens. Stylus 1 vel 3. Stigma spatulatum vel 3-lobum. Semina numero indefinita, marginibus Septorum 2–4-plicive serie inserta, brevissime funiculata; in *Colchico* cotylo succulento semiimmersa, subrotunda; Tunica badia, membranacea; Albumen durum; Embryo ab Hilo remotus; in cæteris ignota. *Herbæ* 6–12-*pollicares, ab utrâque orâ Maris Mediterranei per* Europam *solo calcareo. Radix bulbosa, basi uno latere plus minus rostrata; Tunicæ paucæ, membranaceæ; novâ quotannis e gemmis lateralibus vetustæ perientis nascente. Folia radicalia, aut caule nunc hypogæo elevata, plus minus 2-faria, sublinearia*

vel elliptica, glabra vel pubescentia, æstate evanida. Flores luteo-virides, vel lilacini, nunc tessellati, inodori, erecti, fasciculati, terminales, in aliis ante folia sequente vere prodeuntia autumnales et partim hypogæi. Pedicelli brevissimi. Bracteæ omnino nullæ.

Sect. 1. Petala sessilia.

Gagea. Ann. of Bot. i. p. 553. Ornithogalum Luteum, L. *&c.*

Sect. 2. Petala unguiculata, nunc in Tubum coalita.

Paludaria. Hypoxis Fascicularis, RUSS.
Bulbocodium, J. L.
Merendera, RAM.
Colchicum, J. L. Hermodactyles, TH.

These few Plants are very nearly allied to *Veratreæ* and *Cymbantheæ,* but their Radication and Inflorescence distinguish them from the former; and their thinner membranaceous Petals not rolled in at the sides either before or after expansion, from the latter. *Gagea* in the first section contains several Species, which may not all be legitimate congeners, and when better known will probably constitute an Order by themselves; its Bulbous Roots are formed every year like those of *Colchicum,* with which its Foliage and Inflorescence agree except in being formed entirely above ground; its Petals however are sessile, persistent, and have a retuse melliferous blotch at the base in our indigenous Species, *Ornithogalum Luteum* L. which is my type; its Filaments are inserted in the Receptacle, and not in the Petals as I have stated in the Annals of Botany, trusting then to memory; its Pericarpium from its structure probably splits dorsally in the middle of the Cells, and not at the axis as in *Veratrum* and *Colchicum,* but I have only seen it half ripe; the Style varies exceedingly in being more or less deeply divided, sometimes down to below the middle; but the divisions being closely approximated, the Stigma in such still appears mitre-shaped as in those Flowers where it is hardly at all 3-fid; the young Seeds are white, and the Embryo when they were half grown was long and close to the Hilum. In the second Section, *Paludana* appears to me perfectly sui Generis; it agrees with *Bulbocodium* in Leaves and simple Style, sending up along with the former from 11 to 20 Flowers in a dense Fasiculus; but with *Colchicum* in Corolla, the Tube being hypogæous at the base, and the Limb melliferous as well as slightly pubescent behind the Filaments; Ovarium very narrow, 3-locular and unquestionably superum; Style simple, 3-angular, reaching as high as the Anthers of the longer Filaments; Stigma truncated, and hardly trilobed, minutely pubescent; Seeds numerous, forming a double row in each Cell: specimens were sent to me by BROUSSONET, gathered on the *African* side of the *Mediterranean*; and I have named it after a celebrated physician and botanist, BERNARD VAN DEN BRŒCK, born at *Ober Yssel* in 1550, who afterwards took the name of PALUDANUS; he was the friend of L'ECLUSE, and active in promoting the introduction of new Plants in those days, these five "*his saltem accumulem donis, et fungar inani munere.*" *Bulbocodium*

is pretty common now in our gardens, from Bulbs which I distributed plentifully many years since; it differs from *Merendera* in having auriculated Petals, which cohere at the bottom of their Limb, by the 3 outer Filaments holding the sides of the three inner Petals fast behind them; and its Style is simple. *Merendera* grows wild on the high downs of the *Pyrenees*; and has lanceolate Petals with distinct claws, 3 separate Styles, and according to RAMOND different Anthers to the other Genera; but I have never seen this Plant myself. *Colchicum* blossoms in autumn, its Leaves not appearing till the following spring; its Petals are united into a cylindrical Tube and it has 3 separate Styles. All these Plants delight in a calcareous soil, and probably differ very little in the violently purgative as well as sedative qualities of their Bulbs; at least I can speak from my own experience, that those of our indigenous species are quite as efficacious in removing a fit of the Gout, as the Bulbs of that with undulated Leaves, which is supposed to be the principal drug in the *Eau d'Husson,* and I have no doubt the *Henicodactylus* of the *Greeks,* for there is a strong resemblance between its Bulbs when dried up as sold in the shops, and the Seeds of *Phœnix Dactylifera.*

Ord. 7. CYMBANTHEÆ.

Petala 6, nunc coalita, regularia, varie mellifera, in cunis approximata marginibus sæpe involutis, marcescentia vel decidua. Filamenta 6, receptaculo petalisve inserta, nunc dum Petala manent lege plane inusitatâ decidua. Antheræ oblongæ, vacillantes, extrorsum introrsumve dehiscentes, Valvis recurvis. Pericarpium superum, nunc apice profunde 3-lobum, 3-loculare, axi tantum dorsove dehiscens. Stylus 1–3, vel nullus. Stigma simplex 3-lobumve. Semina numero indefinita, marginibus septorum 2-plici serie sessilia vel funiculata, raro arillata, subrotunda; Tunica badia, membranacea vel crustacea; Albumen durum; Embryo sæpe minutus. *Herbæ in* Sierra Leone, *Promontorio* Bonæ Spei, Hindostan et Novâ Hollandiâ, ½–10-*pedales. Radix tuberosa; vel sæpius bulbosa, uno latere basis rostrata, Tunicis paucis; apice vetustæ mox perituræ quotannis nascens. Folia radicalia vel caulina, alterna, figurâ varia, nunc apice cirrhosa, æstate evanida. Flores fere omnium colorum præter cæruleum, erecti cernuive, spicati vel parum paniculati. Pedunculus caule continuatus. Pedicelli sæpe brevissimi vel nulli. Bracteæ* 1-*riæ.*

Cymbanthes. HORT. TR. Melanthium Eucomoides JACQ. *&c.*
Wurmbea. THUNB.
Ornithoglossum. P. L. Lichtensteinia W.
Bœometra. HORT. TR. Tulipa Breyniana L. *&c.*
Dipidax. HORT. TR. Melanthium Junceum JACQ. *&c.*
Anguillara. R. BR. A. Dioica, *ejus Prodr.*
Burchardia. R. BR.
Methonica. J. HERM. Gloriosa, L.
Notocles. Melanthium Indicum. L.

An Order differing from *Bulbocodeæ* in its more succulent Petals, rolled in laterally during æstivation, or if imbricated having a ten-

dency to roll in immediately after they separate. Their station in the *Southern* Hemisphere, while *Bulbocodeæ* are without exception confined to the *Northern*, is another reason for detaching them, as well as their spiked or panicled Inflorescence, nor have I ever observed their new Tubers or Bulbs produced laterally as in *Bulbocodeæ*, but always at the top; for though the young shoot of *Methonica* rises apparently from the bottom, that extremity is in reality the top, the crooked Fangs of its Tuber striking downwards. *Cymbanthes* has exactly the Bulb and Foliage of *Colchicum*, but differs materially in its Petals; these are boat-shaped, persistent, with Filaments inserted at the tops of their Claws, which are so thick and rounded, that they might be regarded as so many 1-androus Flowers surrounding a single female, did not analogy prove the contrary; its Anthers split towards the Stigmata; the dehiscence of its Capsule is septicidal, and the Spike is so close as to resemble a Fasciculus like that of *Massonia*, often however consisting only of 2 or 3 Flowers. *Wurmbea* has a monopetalous Corolla, to use the old familiar term which DE CANDOLLE has proved to be so unphilosophical, and it is persistent, projecting very curiously into a prominent margin at the base. *Ornithoglossum* has 6 persistent Petals, but Filaments inserted in the Receptacle and deciduous, proving how adverse Nature is to universal Laws in almost every part of the Flower; its 3 slender Styles are also deciduous; and its Pericarpium splits at the dorsal sutures containing many succulent globular Seeds. *Bæometra* on the contrary has deciduous Petals and not wedge-shaped: this Genus differs from all others of the Order, in its long narrow Pericarpium with 3 very short sessile Stigmata, which have suggested my name. *Dipidax* is a *Cape* of *Good Hope* Genus, distinguished by 2 distinct nectaries at the base of each Petal, which is staminiferous and deciduous, and its Anthers split laterally. *Anguillara* of *Mr.* R. BROWN resembles *Dipidax* so much that I should be glad to compare them living; as one species however is dioicous, that is probably a distinct Genus. The Inflorescence of *Burchardia* seems to me a Panicula coarctata, rather than a true Umbel, and its Petals do not fall off till the Pericarpium is considerably swelled, the dehiscence of which is septicidal, as in *Methonica*. I differ from all preceding Botanists about the affinity of that beautiful Genus; ADANSON, LINNÉ, and A. L. DE JUSSIEU have placed it between *Erythronium* and *Uvularia* and it certainly approaches to the latter in many points; but B. DE JUSSIEU also inserts *Fritillaria* after *Methonica*, and this present Order, to which it is here removed on account of its geographical situation, deleterious juice, terminal Panicle, marcescent Petals, and septicidal dehiscence of Capsule, was nearly unknown in their days; as to the Generic Name, any one is preferable to LINNÉ's adjective *Gloriosa*, and *Methonica* may be rendered Canonical in his sense, by deriving it from *μεθυω ebrius sum* and *νικαω vinco*, alluding to its powerful intoxicating qualities: no one, to my knowledge, has noticed the circular Operculum which covers the melliferous part at the base of its Pericarpium, exactly analogous to that of *Passifloreæ* in *Dicotyledones*. *Notocles*, so named from the dorsal dehiscence of its Cap-

sule has deciduous Petals and Filaments, the latter inserted separately in the Receptacle, and being an hermaphrodite Genus with panicled Flowers, approaching to those of some *Tulips* in the succeeding Order of *Fritillareæ*, I cannot follow *Mr.* R. BROWN in joining it to his *Anguillara*; and he even says of it, "*an proprii Generis*." I believe two distinct Species exist in *Hindostan*; one has very narrow finely pointed Leaves, and only from one to five or six Flowers in a Panicle, and this agrees with the description of LINNÉ; the other is a much larger Plant, and *Dr.* ROXBURGH showed me a specimen which had as many as twenty-seven Flowers in the Panicle.

Ord. 8. FRITILLAREÆ.

Petala 6, in cunis imbricata, oblonga, varie mellifera, decidua. Filamenta 6, receptaculo inserta, decidua. Antheræ vacillantes, lateribus dehiscentes. Pericarpium superum, 3-loculare, dorso loculorum sæpius vibrissis dehiscens. Stylus 1 vel 0. Stigma 3-lobum. Semina numero indefinita, marginibus septorum 2-plici serie sessilia, compressa; Tunica fusca, crustacea; Albumen durum; Embryo nunc longiusculus, ad Hilum. *Herbæ in* Europæ Asiæ et Americæ Borealis *temperatis*, 1-7-*pedales. Radix bulbosa, figurâ admodum varia, nunc basi uno latere rostrata, umbilicata, vel squamosa; quotannis super vetustum mox periturum nascens. Folia quædam radicalia, et dum Bulbus sterilis sæpe omnia, pleraque tamen caulina, nunc verticillata, attenuata vel lanceolata, æstate vel autumno evanida. Flores nivei flavi miniati purpureive, nunc maculati, sæpe odoris nauseosi erecti vel cernui,* 1-*rii spicati vel corymbosi, terminales caule in pedunculum sensim transeunte vel immutato. Pedicelli longi. Bracteæ* 1-*riæ, foliaceæ, nunc comosæ.*

Tulipa. J. L.
Fritillaria. J. L.
Monocodon. Fritillaria Pyrenaica L. *&c.*
Petilium. L. *Hort. Cliff.* Fritillaria Imperialis L.
Lyperia. Fritillaria Persica L.
Lilium. J. L.
Martagon. RUPP.

These splendid Plants agree strictly in their Ordinal characters, differing from *Cymbantheæ*, to which they approach nearest, in their Fruits and Seeds; while the various form of their Petals and melliferous Organs, joined to their Inflorescence, afford generic distinctions, hitherto not interrupted by anomalous Species. *Tulipa* has a Bulb with an unilateral beak at its base, like that of *Cymbanthes* and *Colchicum*, and its sessile Stigma induced me formerly to insert it in the preceding Order after *Bæometra* which LINNÉ joined to it; but its Capsule and Seeds differ totally, the former having Vibrissæ, like many others in this Order. I make the essential character of *Fritillaria* to consist in its Petals hunched above their flattened base, then suddenly bent upwards with a tendency to converge, as well as in its very long narrow channelled Nectaries; and its Anthers continue erect after they burst. In *Monocodon*, the

Petals converge nearly to their top, but being afterwards recurved form a truly campanulate Flower, which has oval Nectaries; and in this Genus, the Pericarpium is 1-locular at the top. *Petilium*, formerly admitted by Linné himself, has a 6-winged Capsule quite different from the rest to say nothing of its fasciculated Flowers, comose Bractes, and pearly Nectaries. *Lyperia* produces an immense pyramidal Spike of dull purple Flowers, its Petals converging into a Bowl, the 3 inner much longer and dilated at their base nearly into two ears; its Nectaries are oval, Stigma truncated, and Leaves very glaucous; my name alludes to the sombre aspect of its Flowers. *Lilium* succeeds to *Lyperia*; and the propriety of separating *Martagon* from that Genus has been not only lately suggested by Haworth, but is involuntarily acknowledged by every one who has occasion to mention it in common conversation, its revolute Petals being in my opinion a sufficient diagnostic, if there were no other, but the Pericarpium of every Species I have seen, is more 6-angular.

Ord. 9. Alstrœmereæ.

Pericarpium plus minus inferum, 3-loculare, 3-valve et nunc dissiliens, vel succulentum et indehiscens. Petala 6, in cunis imbricata, plus minus irregularia, nunc mellifera, decidua. Filamenta 6, basi petalorum inserta. Antheræ vacillantes, post anthesin parvæ. Stylus 1. Stigma 3-fidum. Semina fulva, numero indefinita, 2-plici serie inserta, funiculis post ejiciuntur septo adhærentibus, erecta, globosa, sæpe tuberculata; Albumen corneum; Embryo brevis, sub Hilo; Chalaza ampla. *Herbæ in* Americâ Meridionali, ½–20-*pedales. Radix tuberosa, sæpe filipendula, perennis. Caules herbacei, sæpe volubiles. Folia alterna, nunc disticha, sputulata vel lanceolata, in multis resupinata sed torsione petioli pagina inferior solem aspicit, raro pubescentia. Flores speciosi, nunc fragrantes, fasciculati, vel paniculati, erecti vel nutantes. Pedunculi breves vel longi. Bracteæ* 1-*riæ, foliaceæ vel squamaceæ.*

Alstrœmeria J. L. Pericarpium cartilagineum, 6-angulum, usque ad basin in 3 valvas dissiliens, costis relictis. Corolla irregularis. *Caules breves,* ½-*pedales vel paulo plus, non volubiles. Folia spatulata, ultima in una approximata in Rosum. Flores in summis axillis.* Chas Alstrœmer, *nobilis* Linnæi *amicus. Species* 2. A. Peregrina et Lintra L.

Vandesia. Pericarpium membranaceum, 3-angulum, parte superâ tantum 3-valve. Corolla regularis. Radix tuberibus filipendulis globosis. *Caulis volubilis,* 5–10-*pedalis. Folia lineari-lanceolata, fere* Eustreptia. *Flores paniculati.* Anne, *Comtesse de* Vandes, *eximia Botanicorum fautrix. Species* 2. Alstrœmeria Edulis. Jussieu, Salsilla L. *&c.*

Danbya. Pericarpium succulentum, indehiscens. Corolla regularis. *Caulis volubilis. Folia lanceolata. Flores fasciculati.* Henry, *Earl of* Danby, *Hortum* Oxoniensem *anno* 1632 *fundavit, heu non amplius ut in* Bobarti *et* Morisoni *temporibus, decus Academiæ. Species* 2. Alstrœmeria Secundiflora, Distichiflora R. et P. *&c.*

An Order yet little known in *Europe*, containing several Genera,

which I would devote exclusively to Nobility; and the names above mentioned are truly deserving of being handed down to posterity in this way. *Baron* ALSTRŒMER's merit would in all probability have been confined to *Sweden,* if he had not by his patronage of LINNÉ, thus immortalized his own name. One of the largest collections of Exotics from hot Climates in the vicinity of *London* belongs to the *Comtesse de* VANDES, who cultivates them I may say with the strictest truth, as much for the benefit of the public, as her own gratification, the garden at *Bays-water* being liberally opened to Botanists and the rarest specimens given to them, almost without reserve. As for the *Earl of* DANBY, he richly endowed the *Oxford* Garden in 1632, which I regret to add, is at present a disgrace to that university.

Ord. 10. UVULAREÆ.

Petala 6, in cunis imbricata vel lateribus involuta, basi fere in omnibus mellifera, decidua. Filamenta 6, receptaculo petalisve inserta. Antheræ vacillantes, aut filamento confluentes, extrorsum dehiscentes. Pericarpium superum, 1–3-loculare, membranaceum et 3-valve fissuris dorsalibus, vel succulentum et indehiscens. Stylus raro nullus. Stigma 1 vel 3. Semina in plerisque numero indefinita, lutea badiave, nunc arillata; Embryo juxta Hilum Albumine carnoso. *Herbæ per totum fere orbem sparsæ. Radix perennis vel e latere Tuberis mox perituri quotannis nascens. Caulis raro perennis, nunc volubilis. Folia alterna, in paucis radicalia et æstate evanida, sæpius lanceolata. Flores omnium fere colorum præter cæruleum, 1–rii vel fasciculati, axillares vel terminales. Pedunculus nunc scapiformis. Bracteæ sæpe nullæ.*

Phœnocodon. Lapageria R. et P.
Philesia. J. COMMERS.
Callixene. J. COMMERS. Enargea GÆRTN.
Disporum. Uvularia Chinensis KER *in Bot. Mag. No.* 906.
Parduyna. Schelhammera Multiflora R. BR.
Schelhammera. R. BR.
Drymophile. R. Br.
Xeniatrum. Oiole Costote CHEROKIES. Convallaria Umbellata MICHX. *&c.*
Medeola. J. L.
Streptopus. RICHD.
Uvularia. J. L.
Erythronium. J. L.

These Plants have hitherto been dispersed among other Orders, with which in my opinion they had little affinity. *Mr.* R. BROWN refers *Drymophile* and *Streptopus* to *Similaceæ*, which is more extraordinary as the situation of the Embryo in their Seeds differs so much; while he leaves *Parduyna* and *Schelhammera* in an Order still more discordant *Bulbocodeæ.* Many of them have a strong primâ facie resemblance to *Asparageæ* and *Polygonateæ*, but they never have dorsal Stipules to each Leaf as in the former, nor jointed Pedicels as in the latter, and like most of this Class their Embryo

is close to the Hilum. *Phænocodon* I only know yet from RUIZ and PAVON'S figure, for it is not in the Herbarium purchased by LAMBERT, but suspect that it and *Philesia* will connect *Alstræmereæ,* and therefore insert them first. *Callixene* from *Terra del Fuego* having no joint in its Pedicels, melliferous Petals, and Embryo close to the Hilum, no doubt belongs to this Order. *Disporum* is a *Chinese* Genus, so named in the Horticultural Transactions for *February* 1812, v. i. p. 331, from only having two Seeds in each Cell, which are erect and sessile; its staminiferous Petals also protrude at the base into a melliferous Sac. To this with our present knowledge of the Order I think a *New Holland* Genus will succeed, discovered by *Sir* JOSEPH BANKS within the Tropics, a small branch of which given to me by himself is here figured *Tab. fig.* ; it has petiolated Leaves, twisted a little at their base; broadly spatulated Petals attenuated into a melliferous Claw, exceedingly rolled in at their margin while young but ultimately expanding flat; Filaments inserted somewhat above the base of its Petals; and 4 erect Seeds in each Cell, which have a fleshy coat, and arillated Funiculus; it is devoted to the memory of WILHELM PARDUYN, a *Middleburg* Botanist, commended as "*honestissimo viro*" by L'ECLUSE. *Schelhammera* from the vicinity of *Port Jackson* is a suffruticose Plant with sessile Leaves not twisted; solitary terminal Flowers; lanceolate Petals; broadly wedge-shaped Filaments inserted in the Receptacle, but at the same time adhering to the Petals so as to cover the melliferous cavity at their base; a simple Style; and 6 or 7 Seeds in each Cell. *Drymophile* is a more *Southern* Genus from the Island of *Van Diemen* which has a blue Berry, and the Stigmata in my specimen are certainly quite distinct; its Petals, as well as can be judged in a dried state are also melliferous behind the Filament, but as *Mr.* R. BROWN who saw the living Plant makes no mention whatever of a Nectarium in his Generic character, I may here be mistaken. A *North American* Genus with a similar blue Berry, which DESFONTAINES has lately confounded with some true *Polygonateæ* under the inadmissible adjective term of *Smilacina,* follows *Drymophile,* or must at any rate be removed to this Order: it differs from the others 1st in only having 3 or 4 large oval-lanceolate pubescent Leaves, near the Root; 2ndly fasciculated Flowers on a scapiform Peduncle, and short Pedicels, with few or no Bractes; 3rdly Petals nearly equal, contiguous but not imbricated when young, attenuated into a short melliferous Claw which is slightly prominent at the base as in Uvularia, soon deciduous; 4thly Filaments inserted in the Receptacle; 5thly a dark-blue succulent Pericarpium more or less 1-locular without any real Axis, though its Placentas, which are in one Species reduced to two in number sometimes meet at the center; 6thly from 2 to 10 brown oblong sessile Seeds hanging down in a double row from each Placenta; 7thly an umbilicated Stigma with as many very slight lobes as Placentas. Three Species are discovered, two of which I have examined living: the first, *Convallaria Umbellata* of MICHAUX is called *Oiole Costote* by the CHEROKIES, which means *Hunter's Physic,* and has suggested my name of *Xeniatrum*;

this produces from 7 to 13 Flowers in a Bunch, white Petals with a large green spot under their top, and only 2 pendulous Seeds in each Cell; the second Species was discovered by *Mr.* ARCHIBALD MENZIES on the *West* Coast of *North America,* to whom I am indebted both for a Flower and young Fruit; it resembles the former in Leaves, but as he informs me is generally 1-florous, and this has 4 imbricated Seeds hanging down from each Placenta: the third Species is *Dracæna Borealis* of SOLANDER, which has green and yellow Petals larger than in either of the preceding, with 9–11 Seeds imbricated from the top to the bottom of each Placenta, but forced apparently by their number into an horizontal position. LINNÉ established the Genus of *Medeola* in his Amœnitates Academicæ from *Virginica,* which has no affinity to the Species added subsequently from the *Cape* of *Good Hope*; its Leaves are pubescent like those of *Xeniatrum,* and as every part, even the Stigmata are deciduous, the Anthers also splitting towards the Petals I insert it here; the Seeds are slightly arillated. *Streptopus,* the next Genus is established by the authority of RICHARD, and though *Mr.* J. B. KER refuses to admit it, differs essentially from *Uvularia* in its berried Fruit. Lastly, after *Uvularia* I insert *Erythronium* because its Leaves resemble in their tessellation those of *Esdra* in *Parideæ*; and a *North American* Species with yellow Flowers approaches so closely to *Uvularia,* that if they were cut off at the tops of their long radical Peduncles, any one might take them for a Species of the latter Genus, till he examined their Anthers; which in *Erythronium* are pivoted, but in *Uvularia* confluent with the Filament; these two Genera therefore can never be torn asunder in a natural Series. The germination of the Seeds in *Erythronium* being rather curious, I add a figure of those of *Dens canis* L. and believe no Plumula whatever is evolved the first year as in *Brizophile*; this is rendered more probable from the old Bulb often only producing a single Leaf.

Ord. 11. PARIDEÆ.

Calyx 3–4-phyllus; Petala 3–4, calyce angustiora vel multo longiora, nunc ipsa viridia; Filamenta 6–8, receptaculo inserta; hæc omnia marcescentia. Antheræ longæ, Rachide crassa filamento confluentes, introrsum dehiscentes. Pericarpium superum, sphæricum vel globosum, succulentum et indehiscens, vel membranaceum et 4-valve; Placentæ 3–4, e pariete plus minus stipitatæ, centro nunc confluentes. Stylus 1 vel 0. Stigmata 3–4, lateralia. Semina badia, numero indefinita, subrotunda, erecta, 2-plici serie sessilia vel brevissime funiculata; Embryo minutus, Albumine carnoso. *Herbæ in* Europa, Asia, et America Boreali *sylvis,* 5–18-*pollicares. Radix tuberosa, nunc parum repens. Folia* 3–10-*ria, verticillata, in pluribus apice Caulis, sessilia vel breviter petiolata, lineari-lanceolata vel ovali-lanceolata, hyeme evanida: ex horum centro Flos* 1-*rius; viridis niveus atrobadiusve, erectus vel nutans, sessilis vel pedunculatus. Bracteæ nullæ.*

Esdra. Trillium Sessile L.

Trillium. J. L.
Paris. J. L.
Euthyra. Paris polyphylla. SM. *In* Nepal.

This small Order appears to me a very distinct one, especially from *Smilaceæ*, to which *Mr.* R. BROWN joins it. *Esdra* is so named and characterized by having all its Organs both of Vegetation and Reproduction strictly sessile; even its Anthers, which stand erect round the Stigmata have scarcely any Filaments; and its Leaves are variegated like those of Erythronium. In *Trillium* on the contrary the Flower is always pedunculated; this Genus contains several Species, and *Stylosum* of NUTTAL, is probably sui Generis. In *Paris* the 4–8-nary number prevails, and I have seen 5–10-nary; its Petals are considerably narrower than the Calyx, though of the same colour; its Filaments at last become black and succulent like the Fruit; and the Rachis of its Anthers terminates in a long Mucro. *Euthyra* hardly differs from *Paris*, and *Sir* J. E. SMITH has joined them in REES' Encyclopedia; but it has a capsular Fruit splitting into 4 valves, and Styles united at the base; it has also two whorls of Leaves, 8 or 10 in each, petiolated and linear-lanceolate; its calycine Leaves exactly like those below, and these often 4 inches long: this Plant grows wild in *Nepal*, and specimens of it have been sent to *Europe* by *Dr.* WALLICK in great abundance.

Ord. 12. ANDROSYNEÆ.

Petala 6, lanceolata, interiora paulo latiora. Filamenta 6, receptaculo inserta, cuneata. Antheræ filamento confluentes et longiores, in conum cohærentes, hirtæ, foraminibus 2 terminalibus introrsum oblique truncatis Pollen ejicientes, Rachide angusta nec productâ. Perianthium superum, 3-loculare, scariosum, 3-valve. Stylus gracilis, usque ad foramina Antherarum attingens. Stigma minutum, obsolete 3-lobum. Semina numero indefinita, erecta, oblonga, septis 2-plici serie inserta, cæterum ignota omnibus in nostro specimine ab Insectis erosis. *Frutex in Ins.* Nicobar. *Caulis volubilis, aculeatus, forte perennis. Folia alterna, sessilia, longissime cuneata, basi cordata, dorso plus minus aculeata; Nervi paralleli isthmis paucis transversis, nec Smilacum. Flores in rudimentis ramulorum axillaribus terminales,* 1-*rii, nutantes. Bracteæ nullæ.*

Androsyne Gracilis MS. *ἀνηζ vir συν una.*

An insulated Genus, which I think must be placed here in a natural series, and connecting *Roxburghia* with *Parideæ.* It grows wild in the *Nicobar* Isles, and I am indebted for a small branch of it here figured to WILLIAM MARSDEN *Esq.* late Secretary of our Admiralty. It has twining prickly Stems, but whether perennial or not is uncertain, long attenuated Leaves more or less heartshaped at their base and prickly underneath; solitary Flowers terminating short axillary branches, approaching to those of *Roxburghia*, from which it differs in its 6-petalous Corolla, simply wedge-shaped Filaments, Anthers rough with short pubescence, coalescing into a Cone,

and ejecting their Pollen by terminal Pores without any appendage; its Style also reaches to the top of the Anthers, and its Stigma in a dried state is apparently truncated: its Pericarpium, from the remains left on another specimen is thin scarious and probably capsular.

CLAS. 4. SARMENTACEÆ.

This Class includes a very large portion of *Monocotyledonous* Plants, instantly known by a character which has never yet failed me, namely, their jointed Pedicels, either at the base, between the base and top, or at the top. *Mr.* R. BROWN attempted in his Prodromus to combine many of them into one Order under the title of *Asphodeleæ*, which he distinguished by the black crustaceous coat of their Seeds; and it is a character no doubt of some weight; but he now allows in the Appendix to FLINDERS' Voyage, that he may have given too much to it: in fact the Coat of their Seeds is often extremely thin and not crustaceous; and the modifications of its texture, joined to the insertion of the Filaments in the Receptacle or Petals, the union or disunion of the Petals themselves, with the various consistence of the Pericarpium, leave decided intervals between many of these Genera. A pale yellow or brown Coat on the contrary in conjunction with the same characters, affords other intervals equally marked and plain. Accordingly I venture to regard all these Groups, whether consisting of few or more Genera, as so many legitimate Orders, each of which has likewise often a peculiar aspect, or what Botanists call Habitus.

Ord. 1. ROXBURGHEÆ.

Petala 4, inter se distincta, lanceolato-cuneata, interiora latiora, in cunis imbricata, sero decidua. Filamenta 4, receptaculo inserta, basi in Cotylum confluentia, inde late linearia, ultra Antheras pugioniformia. Antheræ filamentis adnatæ, lineares, 2-loculares Rachide prominulâ, 4-valves, introrsum dehiscentes; dein liberæ Valvis Rachideque effœtis in Mucronem elongatis, sed ante anthesin margine dorsali alius in alium intruso coalitæ. Pericarpium superum, ovatum, 1-loculare, membranaceum, ab apice 2-valve. Stigma sessile, penicilliforme. Semina numerosa, ferruginea, basi Pericarpii Placentis 2 parietalibus centro confluentibus et retusis erecta, obovata, striata; Funiculis longis apice pappillosis; cætera ignota. *Herba in* Coromandel *vallibus humidis, 20-pedalis, facie* Tami. *Radix tuberosa, perennis. Caulis volubilis, teres, hyeme periens. Folia læte viridia, inferiora alterna, superiora opposita, petiolata; Lamina ovato-acuminata; Nervi paralleli venis transversis, utrinque prominentes. Stipulæ nullæ. Flores flavo-virides basi intus rubescente, erecti, fœtidissimi. Paniculæ raræ, 5-9-floræ, axillis superioribus. Pedunculus circiter longitudine folii, deflexus, ramis brevibus alternis sursum arcuatis. Pedicelli infra apicem articulati. Bracteæ 1-riæ, squamaceæ.*

Roxburghia KOEN MS. SMITH *in Exot. Bot.* i. *p.* 111. *t.* 57. Ubium RUMPH. *Herb. Amb.* 5. *p.* 365. *t.* 129.

This curious Plant, like the last, at present constitutes an Order by itself. Botanists have differed exceedingly in their ideas of the Flower, and I have no hesitation in saying that Willdenow Persoon and Sims, with the late indefatigable *Dr.* Roxburgh himself are totally mistaken in considering it 8-androus; nor has it the slightest affinity to *Asclepiadeæ*. *Sir* J. E. Smith's description is by far the most correct, but as no figure yet published shows the structure of the different parts accurately, I venture to add my own, *Tab. fig.* ; the internal structure of the Seeds however and situation of their Embryo is yet unknown, those *Dr.* Roxburgh was so good as to send me, being nearly eaten up by insects.

Ord. 2. Peliosantheæ.

Pericarpium seminiferum, 3-loculare, membranaceum, seminibus tumentibus mox parte supera dehiscens. Petala 6, mesogyna, basi coalita, dein horizontalia, rhombea vel ovata, marcescentia. Antheræ 6, Membranâ supra basin petalorum ortâ operculiformi truncatâ sub apice absconditæ, sessiles, rachide perangusta fere didymæ, 4-valves. Stylus crassus. Stigma 3-lobum, umbilicatum. Semina 2–3 in singulis loculis, basi Septorum sessilia, erecta, cito in lucem protensa et tot pericarpia gigantoidea simulantia; Tunica viridis, demum atro-livida, carnosa, apice supra chalazam multo crassior; Albumen album, fere corneum; Chalaza truncata; Embryo parvus, trochlearis, sub Hilo sui Radicula versa. *Herbæ prope* Chittagong, *in Ins.* Pulo Pontangle, 6–18-*pollicares, sempervirentes. Radix multiceps, perennis. Folia* 4–5, *petiolata, erecto-recurva, lanceolata; Nervi longitudinales venis transversis, utrinque prominentes, versus apicem paginæ superioris convexæ contra morem affinium. Flores virides aut sordide violacei, parum nutantes, inodori. Pedunculus medio foliorum, sæpe longior, crassitie Calami* Anserini, *erectus teres. Panicula longa angusta, fasciatim spicata. Pedicelli* 1–7 *approximati, apice articulati. Bracteæ* 1-*riæ ad singulos pedicellos.*

Peliosanthes Jacks. *Species* 2. P. Teta Jacks. *in Bot. Rep. No.* 525. Humilis *ejusdem operis No.* 634.

A third Genus so different from every other, that I am under the necessity of placing it alone. The filamentary Membrane has indeed some similitude to that of *Ruscus*, but none of its other Organs either of Vegetation or Reproduction correspond. The Nerves of its Leaves are prominent on both surfaces with transverse veins like those of *Roxburghia*, and when more of the Plants in the countries it inhabits are known, probably some will be found to connect these more gradually. The early rupture of its membranaceous Pericarpium is very analogous to that of *Leontia*; so here we have another mode of dehiscence common to *Dicotyledones* and *Monocotyledones*.

Ord. 3. Polygonateæ.

Petala 6, varie coalita nunc in Tubum, regularia vel parum irregularia, pericarpio gravido supra basin evanida vel tota detrusa. Filamenta petalis altius demissiusve inserta. Pericarpium superum

vel seminiferum, 3-loculare, carnosum, indehiscens. Stylus 1 vel nullus. Stigma plus minus 3-lobum. Semina 3–7 in singulis loculis, subrotunda; Tunica flava badiave, membranacea; Albumen durum; Papilla embryotega ab Hilo remota. *Herbæ in* Europæ, Asiæ, et Americæ Borealis *umbrosis. Radix tuberosa plus minus repens. Caulis gracilis, quotannis periens. Folia sessilia, alterna verticillatave, sæpe ovali-lanceolata, nunc apice cirrhosa ut in* Methonicâ, *nunc tantum* 2–3 *radicalia, hyeme evanida aut sempervirentia. Flores albi viriduli cærulescentesve, erecti cernuive, spicati vel racemosi. Pedunculi axillares vel terminales, nunc radicales. Pedicelli varie articulati. Bracteæ ad singulos pedicellos* 1-*riæ sæpe minutæ.*

Sect. 1. Folia radicalia.

Ophiopogon. KER. Fluggen RICHD. Slateria DESV.
Convallaria. J. L.

Sect. 2. Folia caule elevata.

Campydorum. Convallaria Verticillata L.
Polygonatum. J. T.
Neolexis. Smilacina DESF. Oiole Nowote CHEROKIES. Convallaria Racemosa L. *&c.*
Maia. Maianthemum ROTH. Convallaria Bifolia L.

These Plants have been joined by all former Botanists to *Asparageæ,* and are certainly nearly related, but have neither dorsal Stipules, nor a definite number of Seeds like them. In *Ophiopogon* the Leaves are linear and evergreen; Pericarpium seminiferum, as in *Peliosanthes*; Petals of a faint dull blue colour; Filaments very short, Anthers long and confluent with the Filaments, converging into a Cone; Berry dark blue with several brown Seeds in each cell, which are erect and agree exactly with those of *Polygonateæ*; otherwise its Habit is so peculiar, that I place it here without much confidence. RICHARD's description and figures are very faithful, and he prefixes some excellent remarks on what differences ought or ought not to constitute Genera among *Liliaceous* Plants. *Convallaria,* the next Genus has only 2 or 3 Leaves and a simple Spike of bell-shaped Flowers, which are uncommonly fragrant; its radical ungulated Peduncle helps to reconcile the junction of *Ophiopogon,* and its Pedicels are articulated at the very top. *Campydorum* is distinguished by an irregular Corolla curved upwards, Filaments inserted higher than in *Polygonatum,* and verticillated narrow lanceolate Leaves. *Polygonatum* is characterized by axillary little Panicles of Flowers, drooping to one side, and a regular tubular Corolla; its Berries are of a dark blue colour. *Neolexis,* called *Oiole Nowote* by the CHEROKIES, which means *Child's physic,* has a very branching terminal Racemus, Filaments nearly as broad as the Petals, and a completely sessile Stigma, which with 3 oblong melliferous Pores above the middle of the Pericarpium and its long leafy Stem detach it completely. *Maia* differs from *Neolesis* in its 4-nary and 2-nary number of parts, Petals only cohering at the base, long Style, and terminal Spike of Flowers in pairs. To unite all these discordant

forms in one Genus will hardly now be contended for by the most servile follower of Linné, nor have I yet questioned any young student of his Genera, who did not own that his feelings were repugnant to so unnatural a junction. A higher authority than mine however has begun the reform, that of Desfontaines, and I have little doubt that a Species from *Nepal*, described by *Dr.* Wallick in the last volume of Asiatic Researches, which has Leaves terminating in a Cirrhus like those of *Methonica*, will turn out to be sui Generis.

Ord. 4. Smilaceæ.

Petala 6, in Stellam sæpe expansa, regularia, fere æqualia, margine plus minus scariosa, decidua. Filamenta 6, basi petalorum inserta. Antheræ parvæ, introrsum dehiscentes. Pericarpium superum, 3-loculare, carnosum, indehiscens. Stylus 1, nunc brevissimus. Stigma 3-fidum. Semina 1–2 in singulis loculis, subrotunda; Albumen carnosum; Tunica flava badiave, membranacea, sæpe lucida; Papilla embryotega, ab Hilo remota. *Herbæ Fruticesve, per totum fere Orbem, alii sempervirentes. Caulis scandens aut volubilis, sæpe aculeatus. Folia alterna subopposita ternave; Petioli sæpe utrinque cirrhigeri; Stipula intra foliacea; Laminæ in multis cordatæ vel hastatæ, nunc maculatæ et aculeatæ, nervosæ, duræ. Flores sæpius dioici, albidi viridesque, spicati fasciculative. Pedunculi breves longive, axillares. Pedicelli basi tumidi et articulati. Bracteæ* 1-*riæ vel in Ripogono* 2 *confluentes, vel* 3.

Smilax, J. L.
Ripogonum ? Forst.
Luzuriaga ? R. & P.

To this small Order, *Mr.* R. Brown joins *Polygonateæ, Parideæ*, and several *Uvulareæ*; but *Smilaceæ* differ from *Polygonateæ* in Habit, besides a definite number of Seeds in their Fruit; and from *Parideæ* and *Uvulareæ* so widely, that I do not include these in the same Class. He describes the Petals of *Smilax*, at least of the females, persistent, of which I do not know a single instance. I have only seen an imperfect specimen of *Ripogonum*, and place it here doubtfully as the Pedicels seem not jointed.

Ord. 5. Asparageæ.

Petala 6, varie coalita nunc in globum, æqualia vel inæqualia, regularia, membranacea vel carnosa, marcescentia. Filamenta 6, petalis varie inserta, nunc in cylindrum tota coalita. Antheræ parvæ. Pericarpium superum, 3-loculare, carnosum, indehiscens. Stylus 1. Stigma 3-lobum. Semina 1–2 in singulis loculis, subrotunda; Albumen corneum; Tunica fulva vel atrobadia, tenuissime membranacea vel crustacea; Papilla embryotega, ab Hilo remota. *Herbæ Fruticesve, alii sempervirentes. Caulis rectus aut volubilis, sæpe aculeatus. Folia alterna, sessilia vel brevissime petiolata, linearia vel lineari-lanceolata, nunc falcata; Nervi paralleli; basi subtus Stipulá adpressá marcescente suffulta, quæ a nonnullis pro vero folio habita. Flores hermaphroditi dioicive, albi viriduli flavescentesve,*

nutantes, fasciculati spicative, nunc 1-*rii. Pedunculus axillaris terminalisve, nunc e disco aut juxta marginem foliorum. Pedicelli graciles, varie articulati. Bracteæ* 1-*riæ, scariosæ.*

Danae, Moen.
Ruscus, J. L. T.
Amphion. Ruscus Androgynus L.
Hecatris, MS. Myrsiphyllum, W. Medeola Asparagoides, L. *&c.*
Asparagus, J. L. T.

Asparageæ may be known immediately by their dorsal Stipules, which some Physiologists regard as the true Leaves; and from the similarity of several Species to *Phyllantheæ,* as well as the absence of any analogous Stipule in the neighbouring Orders, their opinion is perhaps correct. *Danae* of Moench differs from all the rest, in its remarkably thick fleshy sphæroidal Corolla 1-petalous nearly up to the top, besides its spiked terminal Inflorescence; and the whole Fructification is so curious, that I here give a sketch of it, *Tab.* . *Amphion* is characterized by a Stem twining to 30 feet in height or more, as Masson informed me, who saw it wild in the Island of *Madeira*; Leaves glossy, evergreen; from the side nerves of which turned off to the margin its Flowers come out in little close Bunches; its Filaments are completely 1-adelphous as in *Ruscus*; Petals divaricated; Stigma very large and 3-lobed. *Hecatris* has hermaphrodite Flowers, the Petals of which connive closely round the Ovarium before they diverge, with broad Filaments inserted a little below the middle of the Petals, and only one Seed in each Cell of the Ovarium; it is so named from the indifference with which its Branches twine round any support either to the right or to the left; a fact which appears to subvert *Mr.* T. A. Knight's opinion, that the light influences their direction. *Asparagus* is an extensive Genus, and I believe ought to be again divided, leaving the polygamous Species with the indigenous Plant so commonly cultivated in our gardens.

Ord. 6. Dianelleæ.

Petala distincta vel basi imâ coalita, in Stellam expansa, regularia, 3 exteriora sæpe calycina, fugacia et post emarcuerunt haud raro detrusa. Filamenta receptaculo petalisve inserta, regularia, 3 quæ petalis exterioribus opponuntur nunc sessilia vel deficientia. Antheræ in paucis inæquales. Pericarpium 3-loculare, membranaceum carnosumve, 3-valve vel indehiscens. Stylus nunc tumidus. Stigma figurâ varium. Semina numero definita vel indefinita, albuminosa, sæpe arillata; Tunica nigra, membranacea vel crustacea; Embryo Hilo proxima vel excentrica. *Herbæ, Fruticuli Arboresve sempervirentes, plerique in* Novâ Hollandiâ. *Radix fibrosa, grumosa filipendulave. Caulis gracilis vel arborescens, nunc volubilis. Folia figurâ varia, in quibusdam petiolata Laminâ amplâ raro carnosa vel pubescentia. Flores albi lutei cæruleive, erecti vel nutantes, spicati paniculati fasciculative. Pedunculus terminalis vel axillaris. Bracteæ* 1-*riæ, nunc pedicellis oppositæ. Pedicelli varie articulati, in fructu erecti pendulive.*

Herreria, R. & P. In Horto *Kewensi* pulchre scandit, nondum florida, sed florem fructumque communicavit *Cl.* LAMBERT. Pedicelli articulati.

Calcoa. Luzuriaga, R. BR. Petala æqualia, staminigera, nec cum Luzuriaga, R. & P. confundenda; quæ ni fallor ad alium Ordinem pertinet. HENRICUS CALCOENSIS, *Synopseos Herbariæ auctor &c. in* 1493.

Eustrephus, R. BR.

Isandra. Filamenta 6, Antheræ longitudine æquales, quibus a *Chlamysporo* distinctum Genus.

Chlamysporum, P. L. Thysanotus, R. BR. Filamenta 6, potius perigyna quam hypogyna ut in opere citato olim descripsi ad unicum modo florem. Antheræ alternæ longiores.

Thysanella. Ornithogalum Triandrum, LABILL. *&c.*

Johnsonia, R. BR.

Sowerbæa, SM. R. BR. Petala basi coalita, interiora fere duplo majora, parum glumacea, persistentia. Filamenta receptaculo inserta, alterna obconica et sessilia. Antheræ lyratæ, rimâ ovali ad apicem dehiscentes. Capsula septis crassis. Stylus deorsum arcuatus. Stigma obsolete 3-fidum. Semina 2 in singulis loculis, peltata. *Herba cæspitosa. Folia parum glauca, juncea, Stipulâ intra foliaceâ equitantia. Flores purpurei, nutantes, in Paniculâ coarctatâ fasciformi. Pedunculus cylindraceus, solidus. Pedicelli ad apicem articulati. Bracteæ* 6–7 *ad basin Paniculæ imbricatæ, dein ad ramos* 1-*riæ et lacero-multifidæ.*

Laxmannia, R. BR.

Calectasia, DR. R. BR.

Borya, LABILL.

Xanthorhea, SM.

Dasypogon, R. BR.

Xerotes, R. Br. Lomandra, LABILL.

Cordyline, COMMERS. *Huc* Dracæna Ferrea *et* Terminalis L.

Dianella, J. COMMERS.

Cæsia, R. Br.

Styponema. Stypandra *sect.* 1. R. BR. Filamenta, nec Antheræ, stuposa.

Siona. Petala interiora fimbriata. Filamenta apice crassiora et stuposa, quibus a sequente dignoscitur. Antheræ longæ. Semina non arillata. *Flores in Spicâ simplici.* VINCENT SION, *Flandriensis, a* PARKINSON *laudatus, ob. ante* 1629. Arthropodium Fimbriatum, R. Br.

Arthropodium, R. BR.

Tricoryne, R. BR. Semina arillata.

It is not easy to distinguish *Dianelleæ* from *Anthericeæ* by any positive character, for they pass very gradually into one another; I separate them nevertheless on account of their Locality, Habit, and Petals often glumaceous, especially the 3 outer. *Herreria* was sent from *Brazil* to *Kew* for a *Dioscorea*, but though it grows most luxuriantly has not yet flowered; very perfect specimens however

in LAMBERT's Herbarium have enabled me to ascertain that it has jointed Pedicels and a different Embryo, so that it connects very naturally the preceding Order of *Asparageæ*. *Calcoa* differs widely from *Luzuriaga* of RUIZ and PAVON, in many points: and as they describe the latter Genus "*Petalis albidis punctis rubris, exterioribus angustioribus, Baccâ rubrâ, seminibus fulvis*," it possibly belongs to *Smilaceæ*, or if the Pedicels have no joint, to *Uvulareæ*, which must remain undetermined at present, no specimens having reached *Europe*. Of *Eustrephus* one Species is now common here, the Style of which is not "*filiformis*," but swelled towards the top. *Isandra* and *Chlamysporum* have both the full complement of six Stamina, but in the former the Anthers are equal, in the latter unequal in length. *Thysanotus* of *Mr.* R. BROWN contains at least 3 genera, especially if any of the Species have hypogynous Filaments as he states; and their fringed inner Petals, as well as arillated Seeds, are common to several others of the Order: here he complains that I did not adopt his name "*in Herbario Banksiano receptum, et D. Salisburio bene cognitum cum Chlamysporum suum in publica luce emisit.*" To say nothing of his bad *Latin*, this assertion as far as concerns me is totally false; but I should certainly have opposed his selfish desires to taboo that *New Holland* Genus, even if I had known his name; for it flowered in my own garden at *Mill Hill*, though he insinuates to the contrary, from *Mr.* HOOKER's having faithfully delineated its fugacious blossoms as he saw them, not fully expanded; and as he criticizes the dissections in Paradisus Londinensis, they are here repeated from Specimens which it produced the following year. He might justly have corrected me for describing the Filaments hypogynous, but anxious to propagate the Plant and keep it in our collections, I only then dissected one Flower, hoping the others might ripen Seeds. A still better reason for getting rid of *Thysanotus* entirely, is its being so inappropriate a name, none of the Species having any ear-shaped Appendages whatever: to those however distinguished by the total suppression of 3 Stamina, I leave the diminutive of *Thysanella*. The floral Envelope of the next Genus *Johnsonia* is described by *Mr.* R. BROWN "*marcescens, decidua*," which adjectives all Botanists hitherto have opposed to one another: in my specimens it remains marcescens, but as none of the Capsules are ripe or even swelled, their floral Envelope probably may at last fall off; *Johnsonia* like *Thysanella* has only three Stamina, without any rudiments of more. *Sowerbæa* and *Laxmannia* are unquestionably nearly allied; but I do not see any "*facies Polycarpeæ*" in the latter, and so far from being "*affinis Aphyllanthi*," I place that Genus in another Order confined to the *Northern* Hemisphere, *Asphodeleæ*, on account of its large tender petaloid floral Envelope, soon decaying, not glumaceous and persistent as in *Laxmannia*. With respect to *Sowerbæa*, *Mr.* R. BROWN has been still more unfortunate than his predecessor *Sir* J. E. SMITH, the author of this Genus, whose character is only negatively bad, whereas that of my illiberal critic is positively erroneous; for he describes its "*Perianthium æquale*," of which the 3 inner divisions are nearly twice longer; "*Stamina imo*

calyci inserta," which are attached to the Receptacle quite distinct from the floral Envelope; "*Antherarum lobi distincti*;" though they are united by a common Midrib, Connectif of the *French*, at their insertion; "*Stylus filiformis,*" which is 3-angular and curved downwards; "*Stigma simplex,*" which is slightly 3-lobed; "*Umbella congesta capituliformis,*" which is rather a Panicula coarctata fasciformis; and these two kinds of Inflorescence indicate very different origins in *Monocotyledones*; lastly he adds "*affinitate haud longe ab Allio distat,*" while its hard Leaves, imbricated scarious Bractes below the first branches instead of a broad Spatha communis, jointed Pedicels, 3 barren Filaments, and peltated Seeds, are never seen in *Allium*, and incontestably prove that it comes much nearer to *Johnsonia*. Of *Borya Mr.* R. BROWN observes "*Genus nulli cognito arcte affine nisi Johnsoniæ et forte Xanthorheæ*"; a small specimen however for which I am indebted to LAMBERT's kindness, leads me to think that it has no immediate affinity to *Johnsonia*, but a very close one to *Calectasia*, which Genus he leaves in the Order of *Junceæ*, notwithstanding its beautiful floral Envelope differs so widely, being tubular with an hypocrateriform Limb; moreover, he never mentions one of its most remarkable characters, either in his Prodromus, or full description in FLINDERS, voyage, which was pointed out to me by DRYANDER, who suggested the name; namely, the very sharp attenuated base of the Corolla and Receptacle. After these two Genera I insert *Xanthorhea*, distinguished by its highly polished ebony-like Capsules. *Xerotes*, which I think contains more than one Genus, is also placed by *Mr.* R. BROWN in the Order of *Junceæ*, but being clearly related to *Cordyline*, I remove it here after *Dasypogon*; it is irksome to differ so frequently from such an excellent botanist, but I cannot sacrifice to him the opinion posterity may form of my judgment, respecting the affinity of any Plant, which I have thoroughly examined. *Cordyline* forms a small Tree, and one Species in our Stoves with red Leaves has hitherto been referred to *Dracæna*, which it approaches in Flowers, but has very different black shining Seeds. Neither of the two *Dianellas* in the gardens about *London* correspond with the Generic character in the Prodromus Floræ Novæ Hollandiæ; their Petals being unequal, the outer more calycine; their Filaments callosa not stuposa at the top; Style of one gradually attenuated, of the other a little swelled in the middle; their Stigma 3-fid; Pedicels articulated at the top; and Bractes opposite to the Pedicels. To *Styponema* I only refer the first section of *Stypandra*, distinguished by nodding Flowers, Pedicels without Bractes, and opake Seeds; the Filaments also, not Anthers, being stuposa render the latter name absurd. *Siona* flowered at *Mill Hill* in 1809, and not having seen the Fruit and Seeds, I supposed it to be a Species of *Chlamysporum*, till *Mr.* R. BROWN joined it to *Arthropodium*, in his Prodromus; he says however "*an proprii Generis,*" which I now do not doubt about, and have named it after VINCENT SION, born in *Flanders*, but who lived here in PARKINSON's time, and is mentioned by him as "*an industrious and worthy lover of fair Flowers*"; its inner Petals are fringed, Filaments

thickened and finely pubescent towards the top. *Arthropodium* has common Flowers, reflexed Petals, the 3 outer calycine, the 3 inner larger and crenulated; hypogynous Filaments not thickened in the middle, bearded nearly their whole length on one side towards the Petals, and from 7 to 9 Seeds in each cell of its Capsule; I only know one Species *Paniculatum*, which is not very tender, thriving much better here in the open border under the shelter of a south or west wall, than in a Pot. *Tricoryne* is admirably figured by *Mr.* Ferdinand Bauer, in his Illustrationes Novæ Hollandiæ, its yellow Petals and bearded Filaments connecting *Anthericum*; but I insert it here on account of its Fruit and arillated Seeds; a short character of this Genus was written by me in pencil on a specimen laid with *Anthericum* in *Sir* Joseph Banks' Herbarium, so long back as 1798.

Ord. 7. Anthericeæ.

Petala basi ima coalita, in Stellam nunc irregularem expansa vel revoluta, interiora latiora, fugacia, post marcuerunt demum evanida. Filamenta receptaculo inserta, petalis discreta, sæpe barbata. Antheræ longitudine æquales. Pericarpium obovatum vel subrotundum, 3-loculare, 3-valve, membranaceum. Stylus erectus vel reclinatus. Stigma plus minus 3-lobum. Semina numero definita vel indefinita, sæpe angulata, hactenus non arillata; Tunica nigra, membranacea; Albumen durum; Embryo Hilo proximus vel remotus. *Herbæ, rarius annuæ, Fruticulive succulenti. Radix fibrosa grumosa filipendulave, in aliis rapæformis, nunquam vere bulbosa. Caulis dum adest carnosus. Folia sæpius linearia vel lineari-attenuata, glabra vel pubescentia, sæpe carnosa, succo in aliis flavo at non fœtido. Flores albi luteive Vittis* 6 *viridibus, erecti vel nutantes, in quisbusdam vespertini. Spica simplex vel ramosa. Pedunculus terminalis vel axillaris. Pedicelli varie articulati, in fructu erecti.*

Anthericum, J. L. *Syst. Veg. ed.* 13. Filamenta longe barbata. Embryo ab Hilo remotus. A. Frutescens L. *&c.*

Dilanthes. Petala regularia, vix inæqualia. Filamenta subulata, brevissime pubescentia. Semina 5–9 in singulis loculis. *Flores Spicâ longâ sæpe ramosâ, vespere expansi unde nomen* δειλη *crepusculum*. Anthericum Revolutum L. *&c.*

Pogonella. Petala regularia, vix inæqualia. Filamenta medio incrassata brevissime pubescentia. Semina 3 in singulis loculis. *Flores paniculâ terminali valde decompositâ.* Anthericum Planifolium L.

Chlorophyton, Ker *in Bot. Mag. No.* 137 *cum Ic.*

Pessularia. Petala regularia, interiora multo latiora. Stylus reclinatus, sensim incrassatus, unde nomen. Anthericum Ramosum L.

Phalangium, T. Petala regularia, basi imberbia. Anthericum Liliago major, Ker *in Bot. Mag. No.* 1635.

Liliago, Cord. Petala parum irregularia, disco basis barbata. Semina minutissime tuberculata. Anthericum Liliago L.

The Flowers of *Anthericeæ* are generally fugacious, their Petals either expanding into a Star or rolled back like those of *Dracæneæ*; and their Filaments are invariably inserted in the Receptacle,

detached from the Petals. I exclude all Plants from the Order which have a blue or orange coloured Berry, and during L'Heritier's stay here, the propriety of this was debated in a full conclave of learned Botanists assembled in *Soho sq.* but it was decided against me, and their verdict has been more recently confirmed by *Mr.* R. Brown who says in his Prodromus "*Genera baccata a capsularibus certe non removenda.*" I willingly grant that such a Fruit by itself, cæteris paribus, is a character of no ordinal value whatever, but I dissent in toto from the last mentioned carpologist when he applies it to join such Genera as *Anthericum, Cordyline* and *Asparagus*, in one and the same Order, and am here content rather to follow A. L. de Jussieu. *Anthericum* has yellow Petals, united into a Ring; Filaments bearded above their middle with long Hairs; angulated Seeds with an Embryo at a distance from the Hilum; and fleshy Leaves often full of yellow juice, which however does not stink like that of *Aloe.* Under *Dilanthes* I only combine those Species growing wild at the *Cape* of *Good Hope*, which agree with *Anthericum Revolutum* L. and do not expand their Flowers till the evening; their Filaments are awl-shaped, and often finely pubescent, but never bearded with long Hairs. *Pogonella* has white Petals tinged with red externally, equal in size or very nearly so; hypogynous Filaments thickened in the middle and finely pubescent; I have not seen its ripe Seeds, but Desfontaines calls the Fruit a Capsule, and I therefore place it here; the Ovarium of 4 specimens contained 3 Seeds constantly in each cell. *Chlorophytum* differs widely from every other Genus of the Order in its Capsules, the lobes of which are so comprest as hardly to be distinguished at first sight from those of *Aristea*; the Seeds are thin flat and large, but I believe not truly winged; and a Species in *Hindostan*, the Anthers of which become mesenteriform after their Pollen is discharged, must probably be separated. Tournefort's *Phalangium* is now restored by most Botanists of any credit, but I cannot join with it Linné's *Anthericum Ramosum*; for this has the 3 inner Petals very large and crisped, like those of *Arthropodium*, and its gradually thickened Style has suggested the name of *Pessularia.* Lastly, *Liliago* of Cordus by its irregular Flower connects *Dorydium* in the next Order, and though its Petals cohere at their base, its Filaments inserted quite distinct from them in the Receptacle, with an indefinite number of Seeds in each cell, detach it completely as a Genus here.

Ord. 8. Asphodeleæ.

Petala basi coalita, patentissima, nunc irregularia, oblonga, interiora latiora, marcescentia ramentis aliquot semper relictis. Filamenta petalis inserta, basi in operculum dilatata. Antheræ vacillantes, breves vel longiusculæ. Pericarpium superum, subrotundum, 3-loculare, carnosum, demum coriaceum et 3-valve, sinubus septiferis varie melliferum. Semina 2 in singulis loculis, apice septorum pendula vel medio fere adnata, sessilia, angulata nunc utrinque alveolata; Tunica atro-fusca, membranacea; Albumen durum; Embryo longus, Radiculâ nunc in Hilum protrusâ. *Herbæ in* Europâ Aus-

trali, *præcipue ad oram utramque Maris* Mediterranei, ½–6-*pedales. Radix multiceps, perennis; fibris crassis filipendulisve; nunc centum librarum ponderis. Folia cæsia, lineari-attenuata, teretiuscula vel acute carinata, carnosa, succo sæpe flavo, toto anno vegeta aut hyeme pereuntia. Flores lutei albive Vittis* 6, *erecti vel nutantes. Spica simplex vel ramosa, nunc in Fasciculum radicalem coarctata. Pedunculus medio foliorum et sæpius multo longior. Pedicelli supra articulum incrassati, fructigeri erecti vel cernui. Bracteæ* 1-*riæ, scariosæ.*

Sect. 1. Petala et Filamenta irregularia.

Dorydium. Pericarpii Loculi sinubus oppositi. *Flores spicâ longâ simplici, flavi. Pedunculus inferne dense foliatus. Species* 3. Asphodelus Luteus L. Liburnicus SCOP. Creticus, T.

Sect. 2. Petala et Filamenta regularia.

Asphodelus, J. L. Filamenta ultra operculum subulata. Antheræ oblongæ. Pericarpii Loculi sinubus oppositi. *Flores Spicâ longâ ramosâ. Pedicelli fructiferi erecti. Species* 2. Asphodelus Ramosus L. *aliaque foliis latioribus sed floribus minoribus, filamentis magis erectis.*

Ophioprason. Filamenta ultra operculum lineari-lanceolata. Antheræ reniformes. Pericarpii loculi lobis oppositi. *Flores Spicâ gracili ramosâ. Pedicelli fructiferi erecti. Species* 1. Asphodelus Fistulosus L.

Gethosyne. Filamenta ultra operculum subulata. Antheræ oblongæ. Pericarpii Loculi lobis oppositi. *Flores fasciculo radicali. Pedicelli fructiferi cernui. νηθοσυνη lætitia. Species* 1. Asphodelus Acaulis DESF.

The Ordinal and Generic characters of these few Plants, which differ far too much to remain in one Genus, are very clear and easy. *Dorydium* corresponds so little in Habit, and its irregular Flowers, with all the others, that I place it in a separate section; its Peduncle below the Spike is thickly beset with Leaves. In the second section with regular Petals *Asphodelus* has a Pericarpium like that of *Dorydium,* both singular in one respect, for their cells are opposite to the sinusses, which anomaly I have also observed in the Order of *Cepææ*: of this Genus two very distinct Species are still confounded in the gardens about *London,* both passing for *Ramosus* L. though HAWORTH long ago pointed out their differences. In *Ophioprason* on the contrary, the cells of the Pericarpium are opposite the lobes in the usual manner, and its Filaments are linear-lanceolate above their opercular base. *Gethosyne,* so named from its enlivening the parched soil of *Algiers,* agrees with *Ophioprason* in its Pericarpium, if DESFONTAINES' figure be correct; but whether it is or not, the radical Fasciculus of Flowers and cernuous Fruits distinguish that Genus sufficiently.

Ord. 9. APHYLLANTHEÆ.

Petala 6, receptaculo inserta, basi coalita, inferne convergentia, dein recurvo-horizontalia, spatulata, interiora latiora margine crispulo, in cunis convoluta, cito tabescentia. Filamenta 6, carinâ petalorum infra medium inserta, lineari-attenuata, inferne canaliculata

et Stylum stipantia, dein erecto-patentia. Antheræ vacillantes, ovales, introrsum dehiscentes. Pericarpium superum, obovatum, 3-lobum, 3-loculare; an melliferum, et gravidum ignotum. Stylus sensim latior. Stigma 3-fidum lateribus laciniarum inflexis et juxta basin transversim fissis, unde tria circa aliud centrale simulant. Semen 1 juxta medium singulorum loculorum, sessile, matura ignota. *Herba in utrâque orâ Maris* Mediterranei, *collibus siccis*, 6–10-*pollicaris. Radix perennis fibris aridis. Caules tenues, juncei, dense cespitosi, simplicissimi, basi folio* 1 *alterove mox arido cincti, apice* 2 *aliis minoribus et magis glumaceis sub flore imbricati, cylindrici, læves. Folia ipsa lineari-attenuata, teretiuscula, obtusa, basi in Stipulam intrafoliaceum glumaceum parum* 2-*auritum dilatata, perennia. Flores cærulei, erecti, a mane ad vesperem expansi,* 1–2 *fasciati, terminales. Pedicelli brevissimi præcipue dum modo* 1 *; altero si adest, ad latus flexo, paulo longiore, et sensim incrassato ; articulati. Bractea* 1, *ferruginea, glumacea,* 5-*fida uno latere profundius fisso, vices faciemque calycis* Tillandsiarum *omnino simulans.*

Aphyllanthes J. L. est totus Ordo. Fructu maturo et Seminibus ignotis locus in serie naturali parum incertus: olim ad *Bromeleas* retuli, sed numerus partium nimis abludit, et Pedicellorum basis pro certo articulata est.

It is remarkable that so little is yet known of the real affinity of a Plant, which is very common in the south of *France, Spain* and *Algiers*; it has none to *Juncus* certainly, however similar in general appearance. I formerly supposed it related in some degree to *Tillandsia*, its glumaceous Bracte being very similar to the Calyx of several Species now referred to that Genus, but its number of Petals is 6-nary; for the present therefore I insert it here between *Asphodeleæ* and *Bromeleæ*. The name of *Aphyllanthes*, as we learn from L'OBEL, was given to it by some of the *Montpellier* Botanists before his time, not that they supposed the Plant destitute of Leaves, but from their being so few and soon withered; these are very short, like Stipules, obtusely mucronated with their margin dilated towards the bottom into two chaffy intrafoliaceous ears. The Receptacle if only a single Flower is produced is almost sessile, but evidently articulated, and when the Plant produces two Flowers in a Head, the lateral Pedicel is longer, and gradually thickened as in *Asphodeleæ*. In the Generic character of Paradisus Londinensis, its Pericarpium by a typographical blunder is described loculis 5-spermis; but in the subsequent remarks, the Seeds are said to be solitary in each cell, as they really are.

Ord. 10. DRACÆNEÆ.

Petala altius demissiusve coalita, marginibus infra juncturam non liberis, receptaculo inserta, regularia, sero detrusa. Filamenta petalis inserta, regularia. Antheræ vacillantes. Pericarpium aurantiacum, superum, globosum vel 3-pulvinatum, 3-loculare, succulentum, non dehiscens. Stylus sæpe longissimus. Stigma 3-lobum. Semen 1–2 in singulis loculis, sessilia, grandia; Tunica flava, scariosa; Albumen cartilagineum; Papilla embryotega, ab Hilo remota. *Herbæ*

perennes Arboresque, a China et Hindostan *per* Africam *inter-tropicalem in Ins.* Canarienses *desinentes, 6-pollicares vel 50-pedales. Caulis donec floreat simplex, postea ramis dichotomis frondosisve, circulis concentricis vel semicirculis decussatis peripheriâ tardissime ampliatus, in unâ Resinam rubram adstringentem stillans. Folia sessilia basi amplexicauli vel vaginante, nunc more* Aloium *variegata, multifaria, conferta, lanceolata vel lineari-lanceolata, integerrima, obtuse mucronata, glabra, sempervirentia. Flores albi carneive, spicâ nunc paniculatâ, axillari terminalive, fasciculatim sparsi, sæpe vespertini. Pedicelli infra medium articulati. Bracteæ scariosæ.*

Liriope, Lour. Sanseveria Sessiliflora, Ker *in Bot. Mag.* 739.
Sanseveria, Thunb. Salmia, Cav.
Pleomele. Aletris Fragrans L. *&c.* Dracæna Ovata Ker *in Bot. Mag. No.* 1180.
Dracæna, J. L.

A strictly natural Groupe, though so different in size and habit, distinguished from every other of the Class by Filaments truly perigynous, inserted higher or lower in the Petals, and a yellow or orange-coloured pulpy Pericarpium, having only 1 or 2 large Seeds in each cell, with a yellowish scarious Coat adhering to cartilaginous Albumen, with a Papilla over the Embryo which is remote from the Hilum; they are therefore in the last character like many more in *Sarmentaceæ,* analogous to those of *Palmæ.* In Habit they resemble *Aloeæ,* but their juice is neither fœtid nor purgative, on the contrary in one Genus very adstringent. *Liriope* has green linear-lanceolate Leaves, not unlike those of some Epidendreæ, in close tufts; Flowers almost sessile in simple axillary Spikes; Petals united into a Tube then recurved, and the 3 inner ones narrower; Filaments inserted in the orifice of the Tube, and a little thicker at their base; Pericarpium globular; Style very thick; and 2 erect Seeds inserted at the bottom of each cell, but I have not obtained or heard of their being perfected here, whether the Plant was cultivated in a Stove, or in the open ground, for it is quite hardy, bidding defiance to the severest Frost. *Sanseveria* has a knobbed tuberous Root; tufts of radical hard fleshy Leaves, in several Species variegated with transverse bands like Aloes; Flowers in terminal Racemes or very shortly branched Spikes; Petals united into a Tube, then revolute, and the 3 inner ones broader; Filaments inserted under the orifice of the Tube, and there dilated with their margin projecting in such a manner as to close it; Pericarpium 3-cushioned; Style thick; and a sessile Kidney-shaped Seed above the base of each cell. *Pleomele,* so named from the abundance of Honey in its Flowers, approaches to *Dracæna* in Habit; but one Species, discovered by Afzelius at *Sierra Leone,* if it really be a congener, has a stem as slender as a *Goose's* Quill, and so weak as to trail on the ground or neighbouring bushes; in *Fragrans* however, the original type the Stem is thicker and soon converted into hard wood with concentric circles, as well as distinct layers of exceedingly thin Bark, see *Tab.* ; for the Specimen this figure was delineated from, I am indebted to the

unceasing kindness of T. W. Aiton *Esq*, who did not hesitate a moment to ascertain its structure by cutting down a Tree which formerly belonged to Robert James *Lord* Petre; he died in 1742, and therefore it must have been 80 years old or more; its Leaves form Tufts at the end of the Branches, and their scars are circular; Flowers in terminal Panicles, clustered together; Corolla very similar to that of Sanseveria, but the Filaments are inserted in the orifice of the Tube, and thickened immediately above their base; the Pericarpium is yellow or of a deep red lead colour, and more or less 3-lobed according to the number of Seeds fœcundated; I have repeatedly obtained all three in the same Pericarpium by touching the Stigmas with Pollen in hot sunshine; and an unpublished Species in the Botanic Garden at *Chelsea*, treated in this manner, has now a large cluster of ripe Fruits upon it; the Honey so copiously secreted in every Species I have seen of this Genus, should be well shaken out of the Flower, for in our close and damp Stoves, it often rots the young fruit. *Dracæna* resembles *Yucca* in Habit, but has a thicker Stem and long coriaceous Leaves, which not surrounding the whole circumference at their insertion, it becomes reticulated by their Scars; its Flowers are in a vast terminal Panicle; Petals only cohering into a nave; Filaments very thick above their insertion; Seeds quite globular; and Roots often break out from the Stem and branches of old Trees, which live to a great age, probably a thousand years.

Ord. 11. Aloeæ.

Petala in Tubum varie coalita, marginibus interiorum nunc liberis et inter filamenta projectis, vel si omnia discreta, in cylindrum imbricata; regularia vel irregularia; marcescentia sed demum evanida. Filamenta receptaculo inserta, basi imâ sæpe confluentia. Antheræ vacillantes. Pericarpium superum, 3-loculare, membranaceum vel cartilagineum, sæpe costatum, 3-valve; aut carnosum et indehiscens. Stylus brevissimus vel longissimus. Stigma 3-lobum. Semina numero indefinita, angulata; Tunica fusca nigrave, membranacea, nunc alata; Albumen carnosum; Embryo longissimus, axilis, Radiculâ Hilo versâ. *Herbæ Frutices Arboresque vastæ, fere omnes in Africâ* Australi. *Caulis nunc* 4 *pedes diametro, circulis concentricis lignosus et corticatus; Rami in quibusdam horizontaliter protensi, ultimi dichotomi frondosive. Folia glauca viridiaque, sæpe variegata, alterna,* 2–3–5-*faria, sessilia basi vaginante seu amplexicauli, figurâ maxime diversa, integerrima serratave Aculeis, sæpe verrucosa, vix pubescentia, in uno Genere instar* Caricum *attenuata et dura; cæterum carnosa succo in plerisque flavo et fœtido. Flores albidi lutei miniative, erecti cernuive, vix odori. Pedunculus axillaris vel rarius terminalis. Spica simplex vel ramosa. Pedicelli brevissimi longive, varie articulati, in fructu sæpius erecti. Bracteæ* 1-*riæ, scariosæ.*

Phylloma, Ker *in Bot. Mag. No.* 1585.
Triclissa, MS. Tritoma, Ker *in Bot. Mag. No.* 774. *&c. cujus nomen ad* Insectorum *Genus jam dicatum.* Aletris Uvaria L. *&c.*

Ptyas, MS. Kumara, MED. Petala 3 exteriora in Tubum longum rectum coalita, 3 interiora tota libera. *Folia glauca bifurca, linguæformia basibus equitantibus.* A. Disticha L.
Aloe, J. L. DUV.
Busipho, MS. Petala in Tubum sursum arcuatum cylindricum, usque ad ultra medium coalita, dein erecto-patula. Filamenta Stylusque exserta. *Frutex, habitu* Aloium *majorum. Flores lutei, 2-pollicares, Spicâ longâ. In Horto* Kewensi *sine nomine, an* Aloe Ferox? HAW.
Gasteria, DUV.
Haworthia, DUV.
Apicra, W.

I have not examined many Species of this Order, hoping that HAWORTH, who knows them better than any other Botanist, would ere this have described them all more fully in a Monographia. *Phylloma* is a Genus from the Isle of *Bourbon* very properly established by *Mr.* J. B. KER, producing thick fleshy Berries with many Seeds in each cell, but what colour they change to when ripe I do not know, nor that of their Seeds; its Petals converge into an apparent Tube, and it has the yellow stinking juice of many *Aloeæ.* The type of *Triclissa* is *Aletris Uvaria* L., which has a tubular Corolla with very short segments, melliferous Pores at the top of its Pericarpium as in Hyacinthus, and the Leaves of two Species are finely crenulated; *Mr.* J. B. KER's name of *Tritoma* being already occupied in Entomology, I have altered its termination, still preserving some allusion to its 3-angular Foliage. *Ptyas*, like *Aloe Disticha* of LINNÉ, is in my opinion another legitimate Genus, differing from *Aloe* besides other characters, in its 3 outer Petals united into a straight cylindrical Tube considerably beyond their middle, while its 3 inner Petals are quite separate and loose both from the outer, and from each other; MEDICUS has detached it by the *Malabar* name of *Kumara*, not admitted even by ADANSON, and independent of its similitude to *Cumara*, so very absurd for a *Cape* of *Good Hope* tree, that I have given it one derived from its Leaves forming a Fan, πτυον *flabellum.* *Aloe* must probably be divided again, especially such Species as are allied to *Dichotoma* of PATERSON, which grows to be an immense Tree with a trunk 3 or 4 feet in diameter, and branches extending to a circle at their extremities of 400 feet; with some others in this Class, it forms an exception to the mode in which the trunks of several *Monocotyledonous* trees are enlarged, laying on concentric circles both of Wood and Bark, exactly like those of *Dicotyledonous* trees, but I believe without medullary Rays intersecting them from the circumference towards the center. My next Genus *Busipho* is distinguished by a Corolla curved upwards like *Gasteria*, but perfectly cylindrical not swelled out at the base; its Flowers are of an uniform bright yellow colour, 2 inches long, in a simple Spike with a robust Peduncle; in Habit it agrees with the frutescent *Aloes.* *Gasteria* of DUVAL has species with pearly Leaves, showing its affinity to the next Genus; and here an œconomy prevails directly

the reverse of that which is so common in *Amaryllideæ*, the inner Petals being attached to the outer only by their midrib, not the outer to the inner, their sides projecting forward between each Filament from the top to the bottom, so as to prevent the entrance of all larger Insects; whether this is the case however in every species remains to be verified. In *Haworthia* which Duval has stamped with additional value, by so naming it, the Corolla is more or less irregular; and it contains species with only radical Leaves, forming a Rose or Cushion, as well as others which are coalescent with imbricated Leaves, gradually connecting *Apicra* of Willdenow; this resembles Yucca in miniature, and is characterized by its tubular Corolla perfectly regular in every part.

Ord. 12. Agaveæ.

Petala 6, varie coalita, sæpe in Tubum nunc curvum, regularia vel parum irregularia, decidua vel marcescentia. Filamenta 6, receptaculo petalisve inserta, nunc crassissima. Antheræ vacillantes nec hactenus terebratæ ad insertionem, 2-loculares, 4-valves. Pericarpium superum inferumve, 3-loculare septis crassis, 3-valve, membranaceum vel carnosum. Stylus brevissimus longusve. Stigma sæpe amplum, varie 3-fidum. Semina numero indefinita, 2-plici serie septis imbricata, sessilia, horizontalia, compressa vel angulata, albuminosa; Tunica nigra, membranacea; Embryo brevis ad Hilum. *Herbæ perennes Arboresve, inter Tropicos* Americæ *usque ad* Virginiam, 6–30-*pedales. Radix perennis, sæpe sobolifera potissimum dum floret. Caulis si adest cylindraceus sero admodum foliis denudatus. Folia radicalia in rosam conferta, caulina densissime imbricata, sæpe* 4–9-*pedalia, sessilia, lineari-lanceolata vel lineari-attenuata, integerrima crenulata spinoso-dentatave, aut margine fila longa extrudentia, carnosa vel succulentula, rarius herbacea. Flores spicati vel paniculati, erecti vel nutantes. Pedunculus e medio foliorum terminalis, nunc giganteus et caudiciformis ramis protensis, erectus. Bracteæ* 1–2 *ad singulos flores, præter alias infra sparsas. Pedicelli nunc* 2-*ni, brevissimi vel longiusculi, varie articulati.*

Sect. 1. Pericarpium superum.

Yucca, E. L. Lob. Petala 6, campanulata, superiora nunc magis recurva, ovali-lanceolata, marcescentia. Filamenta receptaculo inserta, petalis breviora, erecto-recurva, clavata. Antheræ breves. Pericarpium angustum, oblongum. Stylus fere nullus. Stigma lobis oblongis emarginatis. *Herbæ Fruticesve, a* Mexico, East Florida *in* Virginiam *et flumen* Missouri, 5–20-*pedales. Caulis dum adest cylindricus, ramis paucis erectis. Folia lineari-lanceolata, margine sæpe filamentosa, apice spinulosa, dura, perennia. Flores albidi, nutantes, graveolentes. Panicula laxiuscula densave. Pedunculus basi crassitie brachii. Pedicelli apice articulati. Bracteæ* 1–2. *Species* 9. Y. Filamentosa L. Flaccida Haw. Angustifolia Nutt. Glauca Haw. Recurvifolia P. L. Gloriosa L. Aloifolia Draconis L. Tenuifolia Haw.

Sect. 2. Pericarpium fere vel omnino inferum.

Fourcroya, VENT. Fanium, WILLEM. Pericarpium inferum. Petala 6, patula, ovalia, planiuscula, interiora latiora. Filamenta margine Pericarpii inserta, petalis breviora, obovata cum mucrone. Antheræ longæ. Stylus obpyramidalis apice attenuato. Stigma clavatum, breviter 3-lobum. *Herbæ in Ins.* Cuba Domingo, *facie* Agavium. *Folia* 3–6 *pedes longa, integerrima serratave, succo fœtido saponaceo. Flores viriduli, penduli, odore aliquo* Tagetum. *Panicula oblonga. Pedunculus* 12–30-*pedalis, basi crassitie femoris, apice ramosus, axillis bractearum sobolifer. Pedicelli apice articulati. Bracteæ* 1-*riæ. Species* 4. Agave Fœtida, Cubensis L. Tuberosa, Rigida MILL.

Littea, TAYL. Pericarpium inferum. Corollæ Tubus rectus, infundibuliformis; Laciniæ vix longitudine tubi, revolutæ, lanceolatæ: decidua. Filamenta ore tubi inserta, longissime exserta, subulata. Antheræ longæ. Stylus altitudine medii Filamentorum, sensim crassior. Stigma clavatum, 3-sulcum. *Frutex in* Brazil. *Caulis brevis totus foliis obtectus. Folia viridia,* 2–2½ *pedes longa, recurva, anguste lineari-attenuata,* 4-*gona carinâ acutâ in utrâque paginâ, margine filamentosa ut* Yuccarum, *apice spinosa, glabra, perennia. Flores viridi-purpurei, erecti. Spica longissima, simplex. Pedunculus* 9–11-*pedalis, basi crassitie Brachii. Pedicelli* 2-*ni, brevissimi, apice articulati. Bracteæ ad singulos pedicellos* 1-*riæ, præter exteriorem communem. Species* 1. L. Geminiflora TAYL. *in Bibl. Ital. i. p.* 100 *cum Ic.*

Polianthes, J. L. Pericarpium admodum parum superum. Corollæ Tubus deorsum curvus, infundibuliformis: Laciniæ breves, recurvæ, ellipticæ, 3 superiores nonnihil approximatæ: marcescens. Filamenta supra medium tubi inserta, brevissima, subulata. Antheræ angustæ. Stylus gracilis, altitudine filamentorum. Stigma lobis ovalibus. *Herba in* Mexico *temperatis. Folia viridia, anguste lorata,* Hyacinthi *sed longiora, hyeme pereuntia. Flores albi, nutantes, nocte fragrantissimi. Spica longa, simplex. Pedunculus crassitie digiti minimi, foliis multo longior. Pedicelli* 2-*ni, brevissimi, apice articulati. Bracteæ ad singulos pedicellos* 1-*riæ, præter exteriorem communem. Species* 1. P. Tuberosa L.

Manfreda. Pericarpium inferum. Corollæ Tubus sursum curvus, ad insertionem filamentorum gibbosulus; Laciniæ tubo parum breviores, incurvo-patentes, oblongæ: marcescens. Filamenta medio tubi inserta, longissima, subulata. Antheræ mox caducæ. Stylus vix altitudine corollæ. Stigma lobis obcordatis. *Herbæ a* South Carolina *ad* Virginiam, *facie* Aloium. *Folia* 5–8 *pollices longa, cæsia nunc maculata, in rosam conferta, lanceolato-cuneata, crenulata, succulenta, hyeme pereuntia. Flores viriduli, erecti, odoris aromatici pungentis. Spica longa, simplex. Pedunculus* 4–6-*pedalis, basi crassitie digiti. Pedicelli brevissimi, supra basin articulati. Bracteæ* 2 *ad singulos flores infra articulum, interior lateralis.* MANFREDUS *de Monte Imperiali, scriptor antiquus de Simplicibus. Species* 1. Agave Virginica L.

Agave, J. L. Pericarpium inferum, obovatum. Corollæ Tubus brevissimus, rectus, obconicus; Laciniæ incurvo-patentes, ovali-

lanceolatæ: marcescens. Filamenta apice tubi inserta, crassa, longissime exserta, subulata. Antheræ longæ. Stylus cylindricus, plus minus altitudine filamentorum. Stigma lobis brevissimis obovatis. *Herbæ inter Tropicos* Americæ, *hodie in* Sicilia, *Promontorio* Bonæ Spei *jus civitatis adeptæ. Folia sæpe glauca, 4–7-pedalia, in rosam conferta, lineari-lanceolata, margine spinosa, planiuscula, dura, carnosa, usque ad florescentiam perennia. Flores virides, erecti, nunc fœtidissimi. Panicula oblonga. Pedunculus* 14–30-*pedalis; basi crassitie femoris, ramis protensis, apice densissime florigeris. Pedicelli plus minus secundi, apice articulati. Bracteæ* 1-*riæ. Species* 5. A. Americana L. Vivipara L. Flaccida HAW. Lurida MILL. *fig. in Bot. Mag. No.* 1522. Pyramidalis MS. *quæ* Lurida JACQ. *Coll.* 4. *p.* 94. *t.* 1.

Agaveæ constitute a strictly natural Groupe, though their Flowers differ so remarkably in structure and the Pericarpium varies in being more or less inferum; but their Habit is similar, those which are herbaceous having radical Leaves spreading into a Rose; and a terminal Spike or Panicle is common to all, after producing which the Stem either dies down to the ground, or sends out 2 or 3 branches near the Top. *Yucca,* of which many Species may now be seen in the gardens about *London,* has pendulous Flowers of 6 distinct Petals, like *Fourcroya,* but differs both from that and all other Genera of the Order, in its Pericarpium almost quite superum. *Fourcroya* has been most justly detached by VENTENAT, having pendulous Flowers, 6 distinct Petals, and very thick broad Filaments. *Littea* is also unquestionably a legitimate Genus, though *Mr.* J. B. KER in the translation of *Signor* TAGLIABUE's paper published in 2nd volume of BRANDE's Journal of Science, has joined it to *Agave*; its Leaves are vertically 4-gonous, rather wider than deep, with sharp margins especially the two lateral ones, and long Filaments split off from these as in several Yuccas; in Inflorescence it approaches *Polianthes,* its Flowers being in pairs, but they are far more numerous; and in its deciduous corolla it differs from every Plant of the Order yet discovered. *Polianthes,* which is probably indigenous in *Mexico,* has herbaceous narrowly lorate Leaves, decaying in winter and pushing out in spring; with a long Spike of Flowers in pairs, which are so exceedingly fragrant during the night, that it is called *Soondal Malam* by the *Malays,* and cultivated in most civilized parts of the Globe. The next Genus, *Manfreda,* is so named after an ancient writer on Simples, whose work is in the *Parisian* Library; this Plant has a great look of some *Aloes,* especially when its Leaves are spotted, differing essentially from *Agave* in its simple Spike of Flowers with 2 Bractes to each; a more tubular Corolla curved upwards; and a very broad Stigma, the Lobes of which are so retuse, that it appears at first to be equally 6-lobed. *Agave* lastly contains some of the largest and most useful vegetables in existence, but I cannot perceive so very close an affinity in it to *Aloe,* as *Mr.* NUTTAL mentions in his valuable work on the Plants of *North America*; his words are "*a Genus scarcely differing generically from Aloe, except in the situation of the Capsule, which is inferior.*" Here like the

Botanists of old, I think he trusts too much to outside show in the organs of Vegetation; for in the 1st place, no Species of *Agave* is indigenous in *Africa*, nor any of *Aloe* in *America*; 2ndly their juices seem to be very different, in *Agave* fermenting into a vinous liquor, but in *Aloe* producing the nauseous purgative resin of our shops; 3rdly the Spines of the Leaves in one are confined to the margin, in the other often scattered over the whole disc; 4thly the Inflorescence of *Agave* is terminal, of *Aloe* axillary even in the dichotomous Species; 5thly the Pericarpium of *Agave* has thick dissepiments, of *Aloe* very thin; 6thly the Embryo of *Agave* is very short, of *Aloe* very long.

CLAS. 5. LORATÆ.

These Plants in my judgment constitute a Class, differing essentially from *Sarmentaceæ* in their Pedicels having no joint and from *Spathaceæ* in their Pericarpium superum; nor can they be placed elsewhere without great violence to their natural affinity on both sides.

Ord. 1. HEMEROCALLIDEÆ, R. BR.

Petala 6, basi altiusve coalita, nunc parum irregularia, marcescentia vel decidua. Filamenta 6, receptaculo petalisve inserta, plus minus deorsum reclinata. Antheræ sæpe in thecam terebratæ, 2-loculares, 4-valves. Stylus deorsum reclinatus, nunc brevissimus. Stigma 3-lobum. Pericarpium superum vel maxima parte inferum, 3-loculare, membranaceum, 3-valve, varie melliferum. Semina numerosa, 2-plici serie angulo interno septis imbricata, erecta vel horizontalia, albuminosa; Tunica fusca vel nigra, membranacea vel crustacea, sæpe alata, nunc pubescens; Embryo Hilo proximus, nunc foliaceus. *Herbæ* 1–20-*pedales, Habitu diversæ. Radix perennis, multiceps, fibris sæpe carnosis. Stipulæ nullæ. Folia sessilia vel petiolata, sæpe lorata, nunc ensata. Flores fasciculati spicati paniculative. Pedunculus medio foliorum terminalis, ramis pedicellisque non articulatis. Bracteæ* 1–2 *ad singulos flores, vel* 2 *spathaceæ præter ramentaceas.*

Sect. 1. Seminum Tunica fusca.

Doryanthes CORR. Capsula fere tota infera, obovata, axi dorsoque loculorum dehiscens. Petala basi imâ coalita, recurvo-patentia, lineari-lanceolata, interiora parum latiora, decidua. Filamenta basi petalorum inserta, inter se distincta, undique reclinata. Antheræ basi insertæ, terebratæ. Stylus deorsum reclinatus. Stigma mitræforme. Semina horizontalia, compressa Alâ falcatâ laterali, glabra. *Herba in* New Holland *plagis australibus. Folia viridia* Agavium 3–5-*pedalia, lineari-lanceolata, integerrima, mucronata, perennia. Flores punicei, erecti, inodori. Capitulum Spicis brevissimis alternis conflatum, subrotundum. Pedunculus basi crassitie Brachii,* 14–20-*pedalis, foliis sensim minoribus vestitus, erectus, teres. Bracteæ ad singulos pedicellos* 1-*riæ. Pedicelli breves, apice parum crassiores. Species* 1. D. Excelsa Cow. *in Linn. Tr.* 6. *p.* 217, *t.* 23, 24. *Banes Illust. t.*

Blandfordia, SM. Corollæ Tubus infundibuliformis latere inferiore

nonnihil arcuato; Laciniæ brevissimæ, recurvulæ, interiores latiores et semiorbiculares: marcescens. Filamenta circiter medio tubi inserta, parum secunda. Stylus brevissimus. Stigma angustum. Capsula supera stipitata, mox e corolla protrusa, oblonga, argute 3-loba, axi tantum dehiscens. Semina oblonga, pubescentia. *Herbæ in* New Holland *et Ins.* Van Diemen, 1½–2-*pedales. Folia viridia, lineari-attenuata, exquisite crenulata, fere* Aletris elvariæ L., *perennia. Flores flavo-aurantiaci, cernui, inodori. Spica 7–11-flora simplex, densiuscula. Pedunculus crassitie Calami* Anseris, *erectus, teres. Bracteæ 2 ad singulos pedicellos. Pedicelli graciles, longi, fructiferi erecti. Species* 2. B. Nobilis SM. Aletris Punicea LABILL.

Sect. 2. Seminum Tunica nigra.

Phormium, J. L. FORST. Chlamydia, SOL. Petala basi ima coalita, dein in Infundibulum angustum sursum curvulum imbricata; exteriora lineari-lanceolata et erecta; interiora longiora recurvula et spatulata; marcescentia. Filamenta basi petalorum inserta et ibi confluentia, nonnihil exserta. Stylus altitudine filamentorum. Stigma 3-fidum. Capsula prismatica, axi dorsoque loculorum dehiscens, supera. Semina undique alata. *Herba in Ins.* New Zealand, 5–7-*pedalis. Folia cæsia 2-faria, equitantia, ensata* Iridum, *sempervirentia; fibris tenacibus quas Incolæ in linteas texunt. Flores coccinei erecti. Spica ampla, paniculata; ramis alternis. Pedunculus basi crassitie pollicis, foliis longior, erectus, teres. Bracteæ 1-riæ, deciduæ. Pedicelli brevissimi. Species* 1. P. Tenax L.

Hemerocallis, J. L. Lilio-asphodelus T. Corollæ Tubus cylindricus basi ventricosulâ; Laciniæ tubo multo longiores, recurvo-patentes præcipue superiores, ovales, inferiores latiores: decidua. Capsula supera, ovalis, axi dorsoque loculorum dehiscens. Semina obovata, lucida. *Herbæ a* China *per* Sibiriam *ad* Hungariam et Piedmonte, *campis; una in Ins.* Jamaica; 1–5-*pedales. Folia flavo-viridia, 2-faria, lorata, concava, hyeme pereuntia. Flores lutei vel fulvi, nunc suaveolentes, parum nutantes. Panicula inæqualiter 2-chotoma. Pedunculus in aliis basi crassitie digiti, erectus, teres. Bracteæ inferiores foliaceæ, dein infra singulos pedicellos 1-riæ. Pedicelli breves. Species* 4. Flava, Fulva L. Graminea KENN. Pumila MS. *nondum edita, a Cl.* GRIFFIN *culta.*

Hyperogyne. Phalangium, DIOSC. Petala basi ima coalita, dein in Infundibulum apice recurvum imbricata, marcescentia. Filamenta receptaculo inserta. Stigma obconicum, tenuissime 3-sulcum. Capsula supera, ovata, basi poris 3 mellifera, axi dorsoque loculorum dehiscens. Semina valde compressa. *Herba in* Piedmonte, Savoy, *pratis alpinis. Folia cæsia, lineari-attenuata, autumno evanida. Flores nivei,* Lilii Albi L. *sed minores, nutantes, secundi, ingrati odoris. Spica simplex 7–12-flora. Pedunculus vix crassitie Calami* Anseris, *foliis paulo brevior, erectus, teres. Bracteæ ad basin singulorum pedicellorum, qui brevissimi et crassi. υπερος pistillum, ob figuram Stigmatis. Species* 1. Hemerocallis Liliastrum L. *Sp. Pl. ed.* 1. *dein a clarissimo viro ad* Anthericum *relata.*

Bryocles, HORT. TR. Corollæ Tubus cylindricus basi ventricosulâ;

Laciniæ tubo paulo longiores, parum campanulatæ, late lanceolatæ: decidua. Filamenta receptaculo inserta. Stigma 3-lobum. Capsula supera, anguste obconica, 3-gona, juxta apicem alveolis 3 mellifera, axi dorsoque loculorum dehiscens. Semina fere undique alata; Embryones plures ut in *Citro*, unde nomen. *Herba in* China, $1\frac{1}{2}$-2-*pedalis. Folia viridia, petiolata; Lamina cordata lateribus in cunis involutis, nervis parallelis; hyeme pereuntia. Flores sordide violacei, intus vero lætius, nutantes, inodori. Spica simplex,* 9–15-*flora. Pedunculus crassitie calami* Cygni, *foliis multo longior, erectus, teres. Bracteæ solitariæ ad singulos Pedicellos brevissimos. Species* 1. Hemerocallis Cærulea Kenn.

Niobe, Hort. Tr. Corollæ Tubus cylindricus basi ventricosulâ: Laciniæ tubo parum breviores, recurvo-patentes præcipue superiores, lanceolatæ: decidua. Filamenta juxta basin tubi 2 seriebus vicinis inserta. Stigma 3-lobum. Capsula supera, fere linearis, 3-gona, apice? poris 3 mellifera, axi dorsoque loculorum dehiscens. Semina apice valde alata; Embryo 1-rius, longitudine nunc plus quam $\frac{1}{2}$ albuminis. *Herba in Ins.* Nipen, $1\frac{1}{2}$–2-*pedalis. Folia* Bryoclis *sed flavo-viridia et majora. Flores nivei, nutantes, grati odoris. Spica* 9–17-*flora, densiuscula. Pedunculus crassitie digiti minimi, foliis multo longior, erectus, teres, inter flores angulatus. Bracteæ* 2 *ad singulos Pedicellos brevissimos et parum secundos. Nomen Poeticum. Species* 1. Hemerocallis Japonica Thunb.

Agapanthus, Sol. Manlilia, Dupl. Tulbaghia, Heist. Corollæ Tubus infundibuliformis: Laciniæ multo longiores, spatulatæ, superiores magis approximatæ: decidua. Filamenta sub ore tubi 1 serie inserta. Stigma parum 3-lobum. Capsula supera, elliptica, argute 3-loba, apice ni fallor poris 3 mellifera, axi dorsoque loculorum dehiscens. Semina apice alata, sed in omnibus nostris imperfecta sine Embryone. *Herba in Promontorio* Bonæ Spei, 2–$3\frac{1}{2}$-*pedalis. Folia viridia, 2-faria, lorata,* Leucoii Æstivi L. *sed majora, toto anno vegeta. Flores cærulei, nutantes, inodori. Panicula in Fasciculum coarctata,* 30–70-*flora. Pedunculus crassitie digiti vel plus, foliis multo longior, erectus, cylindricus, nudus. Bracteæ* 2 *spathaceæ, præter ramentaceas ad singulos ramos Pedicellorum qui graciles et cylindracei. Species* 1. A. Umbellatus Sol.

Mr. R. Brown first separated *Hemerocallideæ* as an Order in his Prodromus, where the little he says about them is a tissue of Blunders which would disgrace a novice in Botany; for he quotes at the head of his character "*Narcissorum sectio* 1 *Juss. excluso Gethyllide*," no Genus of which except *Agapanthus* can join any one here, *Bulbocodium* being allied to *Colchicum*, while *Tulbaghia* must unquestionably migrate to the vicinity of *Cepææ*. His next observation "*Sectio potius quam Ordo, Liliis Juss. stricte sic dictis vix diversa nisi perianthio tubuloso*" is as unsatisfactory, the two Orders differing essentially in Radication, Foliage, situation of their melliferous Organs, Petals, Fruits, and Seeds. He then adds "*Huc referenda nonnulla* (*nec omnia*) *genera Asphodelorum Juss. perianthio tubuloso*," giving us for another diagnostic of *Hemerocallideæ*, "*Semina testâ nec atrâ nec crustaceâ*." On reading these two last paragraphs, I

was indeed surprized; for the only Genera among A. L. DE JUSSIEU's *Asphodeli*, which can be associated with *Hemerocallis*, namely *Phormium* FORST. and *Liliastrum* T. have not a tubular floral Envelope, but divided to its base; and their Seeds as well as those of every Genus in the Order, except *Doryanthes* and *Blandfordia*, have a jet black shining scarious Coat. The Organs of Vegetation alone afford characters which separate *Hemerocallideæ* very widely from both the true and false *Amaryllideæ*, their Roots not being bulbous, Leaves composed of tough Fibres; and these combined with their Inflorescence. Pedicels not articulated, Petals coalescing higher or lower, Pericarpium generally though not always superum. Filaments and Style reclined. Seeds brown or black, with an Embryo close to the Hilum in fleshy Albumen, distinguish the Order pretty well. In the first Section with Seeds having a brown Coat, *Doryanthes* is joined by *Mr.* R. BROWN to *Amaryllideæ*, and what is more extraordinary, with *Crinum* and *Calostemma* intervening between it and *Blandfordia*; for it seems to me not very remote especially in Habit, from this last Genus; and on the other side its learned author CORREA DE SERRA long ago noticed its close affinity to *Agaveæ*, where I should certainly have inserted it, if the Pedicels had been articulated; it differs however in its Anthers from *Agaveæ*, agreeing in them more with *Hemerocallideæ*; the Seeds are not unlike those of *Fritillareæ*, but have a still more spungy Coat and lateral wing, with a large foliaceous Embryo. *Blandfordia* is I think on the other side allied to *Phormium*, especially in the structure of its Corolla, for though the Petals are united into a very long Tube that is not strictly regular but a little curved, and the inner ones after they are detached are much broader; its Pericarpium is elevated on a long Stipes, and nearly reaches to the top of the Corolla before that expands, protruding beyond it soon after; the Style therefore as might be expected from the Filaments not being longer than the Corolla is very short; the Stigma is narrow, the Seeds brown, and thickly pubescent with a long narrow Embryo. In the second Section with Seeds having a black Coat, *Phormium* is an interesting Genus in every sense, the fibres of its Leaves being so strong that they are manufactured into cloth by the inhabitants of *New Zealand*, where it grows wild; these are very long and sword-shaped like those of *Iris*, even the Flowers also have some resemblance to those of *Antholyza*, and a still nearer to those of *Pitcairnia*; but such collateral affinities, if indeed they have any claim at all to the name, must give way to others, which place it more immediately here in a natural series; the Spike of Flowers is large and panicled; Petals only cohering at their base, the three outer linear-lanceolate, sheathing the three inner, which are longer and spatulate; Capsule long, 3-quetrous, splitting at its axis and back of each cell into three valves; Seeds black, shining, winged, with a long narrow Embryo often germinating in the Capsule, if that remains in a damp place, see *Tab. fig.* ; drawn from a living specimen sent by my late excellent and honoured friend, the *Bishop* of WINCHESTER, and ripened in his stove at *Farnham*. *Hemerocallis* has bifarious lorate Leaves,

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forming large Tufts; Flowers yellow or copper-coloured, scattered in unequally dichotomous Panicles, with Bractes at a little distance from the Pedicels; the Tube of the Corolla is almost cylindrical; Filaments inserted in the orifice of the Tube; and the Seeds are egg-shaped with a shining black Coat not winged. The next Genus, *Liliastrum* of TOURNEFORT was referred to *Hemerocallis* by LINNÉ in his 1st edition of Species Plantarum, though he afterwards removed it to *Anthericum*; and notwithstanding I am convinced that this Plant is the *Phalangium* of DIOSCORIDES, it will now make less confusion to leave that name for another Genus of TOURNEFORT's, which really does not belong to the Order of *Anthericeæ*; I have therefore called it *Hyperogyne*, from the resemblance of its Stigma to a Pestle, that form also affording a Generic distinction, and *Liliastrum* being a mongrel *Latin* and *Greek* word every way untenable. *Bryocles* and *Niobe* are two *Chinese* Plants, with petioled heart-shaped ribbed Leaves, Flowers in a simple Spike, and Petals united into a Tube a little swelled at the bottom as in *Hemerocallis*, but they do not agree with that Genus sufficiently in other points, or with each other, to remain together. *Bryocles* has a dull violet coloured Corolla, with a ventricose Limb, only one Bracte to each Pedicel, Filaments inserted in the Receptacle; a Pericarpium with 3 melliferous channels at the top; and its Seeds which are winged nearly all round, contain several Embryos, first noticed by *Sir* WILFRID LAWSON *Bart.*, whose figures sent by him to *Sir* JOSEPH BANKS in 1795, are here engraved in *Tab.* . The Leaves of *Niobe* are of a more beautiful yellow green, and more like those of *Pancratium Amboinense*, L. Its Corolla is larger, snow-white, and funnel-shaped; two Bractes to each Pedicel; Filaments inserted in two pretty close series above the bottom of the Tube; Capsule long and narrow; and its Seeds terminate in a long wing like those of *Agapanthus*; I found the Embryo varying exceedingly in length, but always solitary in about 30 specimens which I dissected. The name of *Agapanthus* was proposed by SOLANDER, long before *Dahl's*; his character however in the 1st edition of Hortus Kewensis is incorrect, the Corolla being described regular, which it never is; and this blunder has been copied by all modern writers, even the late accurate *Mr.* CURTIS; its Inflorescence differs materially from that of *Amaryllideæ*, not being a Fasciculus formed of a Spike pressed down, but a Panicle; this appears very evident in some specimens, and is proved in all by the situation of the inner Bractes, which are not solitary at the base of each Pedicel, but surround four or five of them together at each ramification of the Fasciculus.

Ord. 2. THEMIDEÆ.

Petala 6, receptaculo inserta, basi in Modiolum Tubumve altius coalita, regularia, marcescentia at demum evanida. Filamenta ore coalito petalorum inserta, lata, nunc apice 2-aurita. Antheræ vacillantes, 2-loculares, 4-valves. Pericarpium superum, plus minus stipitatum, obconicum, 3-loculare, 3-valve, membranaceum sinubus septiferis melliferum. Stylus erectus. Stigma 3-lobum seu vix.

Semina numero indefinita, nigra, albuminosa ; Embryo vix arcuatus, nunc plures ; Radicula ab Hilo remota. *Herbæ ab* East Florida *ad* Virginiam, *necnon in* Chili *et* Californiæ *oris ; 7–24-pollicares, succo non fœtido. Radix bulbosa, perennis. Stipulæ* 0. *Folia viridia et angusta, vel glauca et lorata* Narcissi, *autumno et hyeme evanida. Flores albidi violaceique, erecti. Fasciculus 5–20-florus. Pedunculus medio foliorum, sæpius gracilis erectus. Pedicelli brevissimi vel longi, apice parum incrassati. Bracteæ 2 spathaceæ, basi equitantes ; præter nunc interiores ramentaceas.*

Hookera, P. L. Brodiæa, SM. Petala in Tubum plus minus urceolatum coalita, dein recurva, oblonga. Filamenta erecta ; alterna cuneata vel bifurca, sæpe castrata ; alterna minora, subulata, antherifera. Pericarpium parum stipitatum. Stigma profunde 3-lobum. *Herbæ in* California, 7–12-*pollicares. Bulbus ovatus Tunicis reticulatis. Folia 4–6, anguste linearia, obtusa. Flores violacei, erecti. Fasciculus laxus densusve, 7–13-florus. Pedunculus gracilis. Pedicelli longi brevissimive. Bracteæ 2, basi equitantes, præter ramentaceas.* WILLIAM HOOKER *n.* Londini 1779, *Florum et Fructuum Pictor vix ulli secundus. Species* 2. H. Coronaria et Pulchella, P. L. *ubi narravi causas quæ Cl.* SMITHIUM *meum nomen prius datum injuste respuere movebant. An vero hasce duas quarum alia 3-andra alia 6-andra recte conjunxerim, hodie dubito.*

Themis. Petala in Tubum brevem obpyramidalem coalita, dein patentia, ovali-lanceolata, subæqualia. Filamenta erecta, omnia apice bifurca et antherifera, alterna paulo longiora. Pericarpium longe stipitatum, unde nomen. Stigma mitræforme. *Herba in* California, 9–12-*pollicaris. Bulbus ovatus. Folia 3–5, lineari-attenuata. Flores albidi Vittis 6 latis purpureis, erecti. Fasciculus laxus 5–9-florus. Pedunculus gracilis, teres, solidus. Pedicelli longi. Bracteæ tot quot Pedicelli, interiores latæ sed brevissimæ. Species* 1. Ornithogalum Ixioides SCHULTZ *in Hort. Kew. ed.* 2. *v.* 2. *p.* 257. Nomen Poeticum.

Hesperocles. Petala in Tubum brevem obconicum coalita, dein incurvo-patentia, parum obovata, subæqualia. Filamenta incurvo-erecta, elliptica cum acuminulo, æqualia. Pericarpium sessile. Stigma vix 3-lobum. Embryones 2–5 in singulis seminibus. *Herba in* East Florida *et* South Carolina, 2–3-*pedalis. Folia 5–7, glauca, anguste lorata* Narcissi. *Flores albi Vittis 6 viridi-rubris extus, erecti, vespere potissimum odorem vinosum spargentes et tunc expansi. Fasciculus laxus 13–20-florus. Pedunculus crassiusculus, foliis longior, teres, fistulosus. Pedicelli longi, sub petalis incrassati. Bracteæ 2, basi equitantes, interioribus nullis. Species* 1. Allium Fragrans VENT.

Oligosma. Petala in Modiolum coalita, dein incurvo-horizontalia, ovali-lanceolata, interiora angustiora. Filamenta patentia, lanceolato-cuneata, alterna angustiora. Pericarpium sessile. Stigma 3-lobum. *Herba in* Virginiâ *et* South Carolinâ, 7–12-*pollicaris. Bulbus ovatus. Folia 4–6, læte viridia, anguste linearia* Amaryllidis Atemaxco L. *autumno evanida. Flores lactei Vittis 6 viridulis aut rubescentulis, antequam expandunt nutantes, dein erecti. Fasciculus*

laxus, 5–9-florus. Pedunculus gracilis, teres, solidus. Pedicelli longi, sub petalis vix crassiores. Bracteæ 2, basi equitantes absque interioribus. Species 1. Ornithogalum Bivalve L. *fig. in Bot. Mag. bis, No.* 1035, 1324.

These few Plants, though most nearly akin to *Cepæeæ*, differ sufficiently in my opinion to constitute a separate Order, 1st in the absence of any garlic smell; 2ndly in their Leaves not so sheathing at the base or dilated till they form the Coats of the Bulb; 3rdly in their more petaloid and less scarious floral Envelope, decaying nearly quite away by the time their Seeds ripen; 4thly in their Seeds indefinite in number with an Embryo at a distance from the Hilum; 5thly they are confined to the continent of *North America.* The young succulent Fruit of *Hesperocles* indeed, when bruised, has a strong flavour, but not exactly alliaceous, and I could not perceive it in the Leaves or Peduncle. *Hookera* has violet-coloured Flowers, with only its alternate Filaments dilated, either wedge-shaped or 2-furcated, and these are in one Species castrated, without even any rudiment of Anthers; its Pericarpium likewise is hardly stipitated. Two Species were described from living Plants in those numbers of Paradisus Londinensis, which came out the 1st days of *March* and *September* 1808. *Sir* J. E. SMITH however, who in his lectures at the Royal Institution had compared their Flowers to *Agapanthus*, and mistaken their barren Filaments for 6 additional Petals which he said corroborated the *French* doctrine respecting the calycine nature of all *Monocotyledonous* floral Envelopes, was so offended with me for contradicting his opinions, that in a paper read after the publication of my first Species, at a meeting of the Linnean Society on the 9th of *April* 1808, but not published till 3 years after in the 9th volume of their Transactions 1811, he called this Genus after a *Scotch* cryptoganist, JAMES BRODIE *Esq.* That gentleman is little indebted to him for connecting his name in any way with such paltry revenge; for what will an impartial historian say, if he compares the benefits Botany has derived from the rich owner of *Brodie House*, with those figures which entitle WILLIAM HOOKER'S name to descend to posterity in the glorious company of ROBERT'S, JOUBERT'S AUBRIET'S, BASSEPORTE'S, MERIAN'S, SPAENDONCH'S, ELWET'S, SOWERBY'S, REDOUTE'S, the two BAUERS, and SYDENHAM EDWARDS', another victim alas of *Sir* J. E. SMITH'S misrepresentations? Nay what will be thought of his own claims to eminence in the higher branches of that Science, to teach which he at last got the ambiguous title of Professor in *London*, though rejected at *Cambridge*, and more lately at his own Alma mater *Edinburgh*? Is not it a fact, that, in natural affinities, which LINNÉ declares to be the "*ultimus finis Botanices*," he has judged erroneously about every Genus he has established which was at all difficult or strange. *Billardiera* supposed by him akin to *Capparides* J., *Tetratheca* to *Pyrola*, *Ceratopetalum* to *Dictamnus*, *Sowerbæa* to *Allium*, *Persoonia* to *Loranthus*, *Lasiopetalum* to *Ericæ* J., *Cryptandra* to *Rhododendra* J., *Stackhousia* to *Terebintaceæ* J., *Correa* to *Rhododendra* J, and lastly *Brunonia* to *Dipsaceæ* J. all too surely warrant this last query. *Themis* was discovered by

Mr. ARCHIBALD MENZIES on the coast of *California* with the preceding Genus to which it approaches very closely; but as the Tube of its Corolla is shorter and all its Filaments bifurcated, DRYANDER left it under Ornithogalum in the last edition of Hortus Kewensis, to which Genus *Mr.* SCHULTZ a former sublibrarian of *Sir* JOSEPH BANKS had referred this Plant, when it blossomed in 1796. I was totally ignorant of its existence, till my constantly kind friend AITON gave me a specimen as a third species of *Hookera*; and on now considering again all the differences of these Plants I doubt the propriety of joining the 3-androus and 6-androus *Hookeras*. *Hesperocles* differs from *Themis* in having thick broad Filaments entire at their top, all of equal breadth and length, as well as a Stigma very slightly lobed; this Genus though indigenous in *Florida* and *South Carolina*, is perfectly hardy, its Flowers expanding towards evening, and then diffusing a fine vinous odour; and its Seeds contain from 2 to as many as 5 Embryos. *Oligosma* approaches so closely to *Hesperocles*, that many Botanists will be inclined to join them; I separate it however 1st for its Habit, having narrow grass-green Leaves lying flat on the ground, not glaucous and lorate like those of *Narcissus*; 2ndly a solid Peduncle; 3rdly its Petals only united for a very short space, and spreading out horizontally; 4thly Filaments gradually attenuated, and the alternate ones narrower; 5thly a 3-lobed Stigma; 6thly its Seeds have only one Embryo.

Ord. 3. TULBAGHEÆ.

Petala 6, receptaculo inserta, in Tubum coalita, dein varie disjuncta: squamæ 3, ori sub interioribus adnatæ: marcescentia. Antheræ 6, fauce tubi 2 seriebus sessiles vel subsessiles, superiores sub squamis. Pericarpium superum, oblongum, non stipitatum, 3-loculare, 3-valve, membranaceum. Stylus brevis vel fere nullus. Stigma 3-lobum. Semina numero indefinita, nigra, albuminosa; Embryo rectiusculus; Radicula ab Hilo remota. *Herbæ in Promontorio* Bonæ Spei, $1\frac{1}{2}$–2-*pedales, succo fœtidissimo. Bulbus conicus vel ovatus, perennis. Folia glauca, lorata vel teretiuscula, æstate evanida. Flores erecti vel nutantes. Fasciculus laxus. Pedunculus medio foliorum, gracilis vel crassiusculus. Pedicelli longi. Bracteæ* 2, *spathaceæ; præter nunc ramentaceas.*

Tulbaghia, J. L. Corollæ Tubus urceolaris; Squamæ ferrugineæ, tuberculares, profunde 2-furcæ; Laciniæ limbi recurvæ, ellipticæ. Antheræ superiores squamis proximæ. *Herba in Promontorio* Bonæ Spei, 15–20-*pollicaris. Bulbus conicus, infra tunicas prominens, fere* Polianthis. *Folia* 7–9, *glauca, lorata* Narcissi. *Flores prasini,* Cacaliæ, *nutantes. Fasciculus* 7–13-*florus. Pedunculus teretiusculus. Bracteæ interiores nullæ. Species* 1. T. Alliacea L.

Omentaria. Corollæ Tubus infundibuliformis; Squamæ purpureæ, planæ, retusiusculæ; Laciniæ limbi patentes, ovatæ. Antheræ superiores squamis parum remotæ. *Herba in* Roode Zand *campis*, 2-*pedalis. Bulbus ovatus. Folia* 5–6, *teretiuscula. Flores purpurei* Calostemmatis, *erecti. Fasciculus* 7–11-*florus. Pedunculus gracilis,*

teres. Bracteæ 2 *præter interiores. Nomen a Squamis planis. Species* 1. Tulbaghia Cepacea L.

These two Plants agree with the preceding Order in their Pericarpium and Seeds, but stink abominably like *Cepæeæ*, from which they differ in having an additional limb to their Corolla, quite distinct from their Stamina, which are inserted below that in two series. So important a distinction therefore very analogous to the Corona of *Narcisseæ*, leaves no doubt with me about the propriety of detaching them as an Order. *Tulbaghia* has glaucous lorate Leaves, and a sea-green Flower resembling at first sight that of a *Cacalia*, its orifice being filled up with 3 brown forked tubercular callosities; Linné and *Mr.* J. B. Ker describe these as one 6-toothed membrane, but I never found them united, and the Plant blossomed repeatedly at *Chapel Allerton*, where it was planted deep in an open border, being covered in frosty weather by a Beehive and the ground receiving some little Heat from a Flue in the wall behind. *Omentaria* in my opinion differs far too much to be joined with *Tulbaghia*; its Leaves are fewer, narrower, and nearly cylindrical as well as I can judge from dried specimens; its Flowers are purple, erect, and not very unlike those of *Calostemma*, with 3 purple flattened callosities, somewhat retuse, but not forked; its Anthers are also inserted lower down in the Tube, than those of *Tulbaghia*. Gærtner describes the cells of a specimen called *Tethynia Inodora* in the *Banksian* Herbarium, 2-spermous; in a Capsule taken from the same specimen however which I examined, each cell contained 6 or 7 Seeds, the greater part of which were perfect, with a strong smell of *Garlic*, and Dryander believed it to be no other than *Cepacea*, which indeed Gærtner quotes.

Ord. 4. Cepæeæ.

Petala 6, varie coalita, sæpe tantum basi nec unquam in Tubum longum, regularia, sæpius membranacea, marcescentia. Filamenta receptaculo petalisve inserta, inter se discreta vel confluentia, simplicia vel bifurca. Antheræ vacillantes, 2-loculares, 4-valves. Pericarpium penitus superum, 3-loculare, 3-valve membranaceum vel scariosum, sinubus septiferis varie melliferum. Stylus erectus. Stigma sæpius minutum. Semina numero definita vel indefinita, nigra, figurâ varia; Embryo excentricus, in multis arcuatus; Radicula ad latus Hilo proxima vel alterâ extremitate obversa. *Herbæ totius Orbis, præter forsan* Novam Hollandiam, *succo in plurimis fœtidissimo acri et lacrymas ciente,* $\frac{1}{2}$*–6-pedales. Bulbus a magnitudine* Pisi *usque dum* Rapam *æquat, perennis. Stipulæ nullæ. Folia figurâ admodum varia, lorata vel fistulosa nunc lanceolata, præter vaginam brevem longissimamve raro petiolata, æstate evanida vel perennia. Flores raro conspicui, nondum coccinei quamvis rosei non desint. Fasciculus corymbosus vel capitatus,* 7–150-*florus. Pedunculus medio foliorum, teres vel angulatus. Bracteæ* 1–3, *spathaceæ; præter interiores nunc deficientes. Pedicelli breves longive, apice crassi.*

Hexonychia. Petala basi imâ coalita, incurvo-horizontalia, ellip-

tica, obtusa, interiora majora, membranacea. Filamenta basi petalorum inserta, in Cotylum confluentia, incurvo-patentia, subulata, longitudine fere æqualia. Pericarpium turbinatum, 3-quetrum angulis 2-dentatis unde nomen. Stigma hemisphæricum. *Herba in regionibus fluminis* Missouri, 7–12-*pollicaris. Bulbus ovatus. Folia* 4–5, *juxta bulbum approximata, viridia, vaginantia ; Lamina anguste linearis, acute carinata ; hyeme pereuntia. Flores purpurei, erecti. Fasciculus laxiusculus,* 25–40-*florus. Pedunculus* 1 *vel* 2 *ex axillâ exteriore et medio foliorum, ante florescentiam nutans, parum angulatus, solidus. Pedicelli longi. Bractea* 1, *uno latere fissa, absque interioribus. Species* 1. Allium Stellatum Nutt.

Calliprena. Petala basi imâ coalita, incurvo-patentia, ovata, interiora longiora, membranacea. Filamenta receptaculo inserta, inter se distincta, petalis longiora, erecto-patentia, subulata basi strumosa. Pericarpium turbinatum, 3-quetrum angulis in lamellam 2-fidam productis. Stigma hemisphæricum. *Herba in regionibus fluminis* Missouri, 1½-*pedalis. Bulbus oblongus. Folia* 4–5, *viridia, juxta bulbum conferta, vaginantia ; Lamina anguste linearis, apice attenuata, obtuse carinata ; hyeme pereuntia. Flores pallide rubri, cernui. Fasciculus densus,* 30–50-*florus. Pedunculus apice cernuus, parum anceps, solidus. Pedicelli longi. Bracteæ* 2 *breves, interioribus nullis.* καλλος *pulchritudo,* πρηνης *pronus. Species* 1. Allium Cernuum Roth. *fig. in Bot. Mag. No.* 1324.

Raphione. Petala basi imâ coalita, incurvo-patentia, obovata, interiora admodum parum longiora, membranacea. Filamenta basi petalorum inserta, parum longiora, confluentia, erecto-patentia, subulata, alterna breviora. Pericarpium ovale, 6-gonum. Stylus brevis. Stigma hemisphæricum. *Herbæ in* Europâ, Asiâ Minore *et regione* Atlantis, 2½–3½-*pedales. Bulbus oblongus. Folia* 3–4, *pedunculo elevata, vaginantia ; Lamina lineari-attenuata, canaliculata ; hyeme pereuntia. Flores albido-virides, penduli. Fasciculus densus,* 60–100-*florus. Pedunculus gracilis, erectus, teres, solidus. Pedicelli longi. Bracteæ* 2, *in caudam longissimam attenuatæ unde nomen. Species* 4. Allium Pallens, Paniculatum, Oleraceum, Carinatum L. *et forsan* Flavum L.

Xylorhiza. Petala basi imâ coalita, incurvo-horizontalia, elliptica, obtusa, interiora majora, membranacea. Filamenta basi petalorum inserta, inter se distincta, apice recurva, lanceolato-attenuata, alterna multo latiora. Pericarpium turbinatum 3-lobum. Stigma hemisphæricum. *Herbæ in* Dauphiné, Switzerland, Sibiria, *rupestribus,* 9–12-*pollicares. Bulbus* Porri. *Folia* 5–7, *glauca, juxta terram approximata vaginantia ; Lamina linearis, vix semiteres, parum torta ; hyeme durantia. Flores violacei, erecti. Fasciculus densus,* 20–50-*florus. Pedunculus gracilis, foliis longior, erectus, plus minus angulatus, solidus. Pedicelli breves. Bractea* 1, *brevis, absque ramentaceis.* ξυλον *lignum* ριζα *radix. Species* 2. Allium Senescens, Angulosum L. *an huc* Bisulcum Vent. ?

Berenice. Petala vix coalita, incurvo-patentia, ovato-cuneata, retusa, interiora multo longiora, membranacea. Filamenta basi petalorum inserta, multo longiora, parum confluentia, erecto-recurva

lanceolato-attenuata, alterna latiora et breviora. Pericarpium gigartoideum, 3-lobum, loculis 1-spermis. Stigma minutum, hemisphæricum. *Herba in* Savoy, Languedoc, Aragon, *montibus*, 1–1½-*pedalis*. *Bulbus angustus, Tunicis valde reticulatis. Folia* 2–3, *pedunculo elevata, vaginantia; Lamina ovalis, costis parallelis; autumno pereuntia. Flores albo-virides cum rubore, erecti. Fasciculus densissimus*, 50–90-*florus. Pedunculus crassus, superne* 3-*queter uno latere convexo, solidus. Pedicelli breves, ungulati. Bractea* 1, *uno latere fissa, interioribus nullis. Nomen Poeticum ob virtutes Radicis olim magni habitas. Species* 1. Allium Victorialis L.

Allium, T. Petala vix coalita, incurvo-patentia, ovata, interiora majora, membranacea. Filamenta basi petalorum inserta et longiora, parum confluentia, erecto-recurva, anguste cuneata, alterna latiora et 2-dentata. Pericarpium obpyramidale, 3-lobum. Stigma minutum, hemisphæricum. *Herba a flumine* Jaik *ad* Jeniseum *montibus*, 1½-*pedalis. Bulbus oblongus. Folia* 6–7, *glauca, juxta terram conferta lorata* Narcissi, *post florescentiam pereuntia. Flores albido-purpurei, erecti. Fasciculus capitatus*, 100–150-*florus. Pedunculus compressus, valde anceps, ante florescentiam nutans, solidus. Pedicelli brevissimi. Bractea* 1, *uno latere fissa. Species* 1. Allium Nutans L.

Porrum, T. Petala disco basis vix coalita, incurvo-patentia, ovato-cuneata, interiora parum latiora, membranacea. Filamenta basi petalorum inserta, paulo longiora, inter se discreta, erecto-patentia, alterne multo latiora et 2-cuspidata. Pericarpium ovato-pyramidale, Membranâ truncatâ super nectaria. Stigma parvum, hemisphæricum. *Herbæ in* Europæ *vineis et agris*, 3–4-*pedales. Bulbus oblongus. Folia* 11–15, *glauca, interiora pedunculo elevata, vaginantia; Lamina lorato-attenuata, nunc serrulata; post florescentiam pereuntia. Flores albidi vel purpurascentes, erecti. Fasciculus subrotundus*, 150–200-*florus. Pedunculus teres, parum fistulosus. Pedicelli longi. Bractea* 1, *ampla; præter interiores brevissimas. Species* 1. Allium Ampeloprasum L. *quam ab ejus* Porrum *distinguere nequeo. An jungendæ* Sativum L. et Scorodoprasum L.?

Cepa, T. Petala basi imâ coalita, incurvo-horizontalia, ovato-cuneata, interiora majora, membranacea. Filamenta basi petalorum inserta, parum longiora, confluentia basibus dilatatis præcipue alterna quæ plus minus 2-dentata. Pericarpium sphæroideum, 3-lobum membranâ truncatâ super nectaria. Stigma hemisphæricum. *Herba* 3–4-*pedalis, patriâ ignotâ. Bulbus sphæricus. Folia* 5–6, *glauco-viridia cum rore, juxta bulbum conferta, vaginantia; Lamina teres, inflato-fistulosa, versus apicem attenuata; hyeme durantia. Flores albido-virides, erecti. Fasciculus subrotundus, valde decompositus et evidenter e Paniculâ coarctatus*, 150–200-*florus. Pedunculus structurâ foliorum sed firmior. Pedicelli breves. Bractea* 1, 2–3-*fida, præter interiores brevissimas. Species* 1. Allium Cepa L.

Phyllodolon. Petala disco basis tantum coalita, arcte conniventia, ovato-cuspidata, eroso-serrulata, interiora longe majora, membranacea. Filamenta basi petalorum inserta et multo longiora, confluentia

basibus nonnihil dilatatis, alterna breviora. Pericarpium sphæroideum, valde 3-lobum. Stigma hemisphæricum. *Herba prope* Lacum Baical *fissuris rupium, 2–3-pedalis. Bulbus et Folia ut in* Cepa, *unde nomen. Flores albo-virides, erecti. Fasciculus capitatus, simplex nec decompositus,* 100–150-*florus. Pedunculus structurâ foliorum. Pedicelli breves, a summo deorsum florentes, itaque non spicati. Bractea* 1, *bifida absque interioribus. Species* 1. Allium Fistulosum L.

Camarilla. Petala vix coalita, incurvo-patentia, ovato-lanceolata, serrulato-erosa, interiora majora, membranacea. Filamenta receptaculo inserta, inter se libera, petalis multo longiora, subulata. Pericarpium ovatum, super nectaria fornicatum unde nomen. Stigma hemisphæricum. *Herba in* Sibiria, $2\frac{1}{2}$-*pedalis. Bulbus angustus. Folia* 5–8, *glauca, pedunculo elevata et inter se remota, vaginantia; Lamina torta, late ligularis; hyeme evanida. Flores viridi-lutei, erecti. Fasciculus capitatus,* 80–120-*florus. Pedunculus crassitie Calami* Anseris, *erectus, teres, solidus. Pedicelli breves. Bracteæ* 2, *an interiores adsint describere omisi. Species* 1. Allium Obliquum L.

Schœnissa. Petala vix coalita, recurva, lanceolato-cuneata, interiora majora vel minora, membranacea. Filamenta basi petalorum inserta, in Cotylum confluentia, subulata, vix inæqualia. Pericarpium sphæroideum, sinubus super nectaria parum fornicatis. Stigma hemisphæricum. *Herbæ in* Dauphiné, Caucasi *et* Sibiriæ *alpibus,* 7–13-*pollicares. Bulbi aggregati, angusti. Folia* 4–5, *glauco-viridia, vaginantia; Lamina teretiuscula vel semiteres,* Juncorum; *hyeme durantia. Flores rosei, erecti. Fasciculus subglobosus,* 30–50-*florus. Pedunculus gracilis, teres, fistulosus. Pedicelli breves longiusculive. Bracteæ* 2 *spathaceæ. Species* 3. Allium Schœnoprasum L. Roseum Brock. Caucaseum Ker.

Butomissa. Petala basi coalita, stellata, lanceolato-cuneata lateribus versus basin replicatis, interiora latiora, membranacea. Cætera ut in *Schœnissa* præter sinus pericarpii vix fornicatos. *Herba in omni* Sibiria *apricis siccis,* 10–15-*pollicaris. Bulbus oblongus. Folia* 5–6, *glauca, basi vaginantia, semiteretia, cava, hyeme durantia. Flores pallide rosei, fere* Butomi, *erecti, odore* Ulmariæ T. *Fasciculus corymbosus,* 18–40-*florus. Pedunculus erectus, teres, fistulosi. Pedicelli longi et æquales. Bractea* 1 *spathacea, præter interiores. Species* 1. Allium Tataricum L.

Hylogeton. Petala vix coalita, lanceolata, cito decidua. Filamenta basi petalorum inserta, leviter confluentia, subulata, æqualia. Pericarpium turbinatum, valde 3-lobum. Stigma hemisphæricum. *Herbæ in* Europâ Boreali et Sibiriâ *nemorosis,* 7–10-*pollicares. Bulbus angustus. Folia* 1 *vel* 2; *Petiolus nunc atro-ruber, linearis, semiteres; Lamina viridis, lanceolata, fere Convallariæ; initio æstatis evanida. Flores nivei, erecti. Fasciculus corymbosus,* 10–20-*florus. Pedunculus 3-queter, crassiusculus, solidus. Pedicelli longi, in fructu plus minus penduli. Bracteæ* 2 *spathaceæ, mox caducæ absque ramentaceis.* υλη *sylva* γειτων *vicinus. Species* 1. Allium Ursinum L. *Fœtor herbæ læsæ intolerabilis.*

Molyza. Petala disco basis coalita, lanceolata, interiora angustiora, in fructu conniventia et valde rigida. Filamenta basi petalorum

inserta, parum confluentia, lineari-attenuata, æqualia. Pericarpium sphæroideum, retuse 3-lobum. Stigma hemisphæricum. *Herba in montibus* Pyrenæis, Baldo, Hungariâ, *nemorosis, 7–12-pollicaris. Bulbus ovatus. Folia* 1–2, *glauca, sessilia, lanceolata,* Tulipæ, *æstate evanida. Flores lutei, erecti. Fasciculus corymbosus,* 11–20-*florus. Pedunculus crassiusculus, cylindricus, solidus. Pedicelli longiusculi. Bractea* 1, *uno latere fissa absque interioribus. μολυζα caput allii. Species* 1. Allium Moly L.

Canidia. Petala disco basis coalita, ovali-lanceolata, vix inæqualia, fructu maturo scariosa. Filamenta basi petalorum inserta, in Cotylum confluentia, cuneata, vix inæqualia. Pericarpium turbinatum Septis latissimis sinubus oppositis. Stigma parum 3-fidum. Semima 9–12 in singulis loculis, matura ignota. *Herba in utrâque orâ* Maris Mediterranei, *Ins.* Teneriffe, Portugal, 1½–2-*pedalis. Bulbus ovatus. Folia* 5–7, *fere* Ornithogali Pyramidalis L. *sed non lucida, dum floret tabescentia. Flores albi, secundum Cl.* BROTERO *cum rubore extus in natali solo, erecti. Fasciculus corymbosus,* 30–50-*florus. Pedunculus crassiusculus teres, solidus. Bractea* 1, *profunde* 2-*fida. Nomen a fictis Herbæ viribus. Species* 1. Allium Magicum L.

Iulus. Petala disco basis coalita, ovalia, plus minus erosa, interiora minora, demum scariosa. Filamenta basi petalorum inserta, parum confluentia, anguste cuneata, parum inæqualia. Pericarpium turbinatum, 3-lobum. Stigma 3-lobum. *Herbæ in* Portugal, *utrâque orâ Maris* Mediterranei, *Ins.* Teneriffe, *vineis et agris,* 10–15-*pollicares. Bulbus ovatus. Folia* 3–5, *pedunculo parum elevata, vaginantia, lineari-attenuata, obtuse mucronata, pubescentia, fine veris evanida. Flores nivei, erecti. Fasciculus corymbosus,* 12–40-*florus. Pedunculus gracilis,* 3-*gonus vel teres, solidus. Pedicelli longi. Bractea* 1, *uno latere fissa, absque ramentaceis. ιουλος lanugo. Species* 2. Allium Subhirsutum L. Niveum ROTH. *An his jungenda* Roseum L. *cujus Antheræ lyratæ?*

Saturnia, MARATT. Petala inferne coalita, oblonga, patentia, demum omnia sursum curva ita ut parum irregularia, scariosa. Filamenta supra basin petalorum inserta, in Cotylum confluentia, patentia, æqualia. Pericarpium turbinatum; Septa lobis opposita ut in Asphodelo, latissima. Stigma 3-lobum. *Herba ad oras Maris* Mediterranei, *collibus apricis,* 3–5-*pollicaris. Bulbus vix magnitudine* Avellanæ. *Folia* 3–5, *cæsia, lineari-attenuata, pubescentia, fine veris evanida. Flores albi Vittis* 6 *viridibus, post anthesin cernui. Fasciculus laxiusculus, nunc ramo longiusculo decompositus,* 7–13-*florus. Pedunculus brevissimus, sæpe vix ultra terram, teres, solidus. Pedicelli apice valde incrassati. Bractea* 1, 2–3-*fida. Species* 1. Allium Chamæmoly L.

Briseis. Petala disco basis coalita, recurva, oblonga, interiora angustiora post anthesin conniventia et scariosa. Filamenta supra basin petalorum 2 seriebus inserta, subulata. Pericarpium turbinatum. Stylus 3-fidus. Stigmata 3, hemisphærica. Semina arillata. *Herba ad oras Maris* Mediterranei *agris,* 7–12-*pollicaris. Bulbus ovatus. Folia glauca, lorata, acute carinata instar* Caricum, *æstate evanida. Flores nivei Vittis* 6 *viridibus, post anthesin nutantes. Fasciculus*

densus, 7–13-*florus. Pedunculus* 3-*queter, solidus ut mox quasi pondere fructuum dejectus. Pedicelli longiusculi, apice valde incrassati. Bracteæ* 2 *spathaceæ, mox caducæ absque interioribus. Nomen Poeticum ob fructus cernuos. Species* 1. Allium Tiquetrum L.

The fœtid smell which these Vegetables so generally exhale, has been since the time of Linné, I may say, the only character of *Allium*; every one which had it, however discordant either in its organs of Vegetation or Reproduction, being joined together by him, in his rage for abolishing the Genera of Tournefort; till at last to make *Governor* Tulbagh some amends for not adopting that Genus which Heisler had called by his name, he selected two Plants of the preceding Order, to perpetuate it. The smell of *Cepææ* is indeed frequently so intolerable that after dissecting about half the species in our collections, I abandoned the rest. Those now described however seem to me types of legitimate Genera, differing often materially not only in Leaves and Flowers, but in their Fruits and Seeds, which latter Haller and Linné neglected to examine; and to join them all in one Genus solely for their peculiar juice, would be as absurd as to join all *Ricineæ, Diosmeæ, Amyrideæ, Asclepiadeæ, Myrteæ* or *Laureæ*. No division can be more repugnant to their immediate affinities with one another, than that of Haller, taken from the Bulbs formed within their spathes, and which Linné unfortunately adopted, a character according to *Mr*. J. B. Ker, not constant even in the same Species; but if it were, *Allium Ampeloprasum* is torn away from its nearest relations, *Sativum, Scorodoprasum* and *Arenarium*; *Triquetrum* stands most unaccountably next to *Cepa*; and that to *Moly*; while *Chamæmoly* though closely allied to *Triquetrum* is driven to the rear of all. With my present limited knowledge of this Order, I divide it into Genera from the various structure of the Bulb, Leaves, Bractes, Petals, Filaments, Stigmata, Fruits and Seeds. *Hexonychia* the first Genus is distinguished by the 2-dentate angles of its Pericarpium, and perigynous Filaments dilated at their base into a little Saucer. *Calliprena* has very similar Flowers and Fruit, but according to *Mr*. J. B. Ker hypogynous Filaments; for I neglected to determine this point myself. *Raphione* is easily known by its 2-valved long tailed Spatha. *Xylorhiza* has distinct Filaments, wedge-shaped, recurved towards their top, and 3 of them much broader than the others. *Berenice* differs totally in Habit from every plant of the Order, its Leaves being broadly oval and ribbed, not unlike those of some *Gentianeæ*; its Filaments are longer than the Corolla, very unequal, the 3 shorter much broader than the others; and its Pericarpium only contains 1 Seed in each Cell. Tournefort, who knew better how to separate Genera than to characterize them by words, referred every species of the Order with simple Filaments and a bulbus Root surrounded by Offsets, to *Allium*; I only join under it any which may agree with *Nutans* L. in having their alternate Filaments more bifurcous than in *Cepa,* and flat Leaves crowded near the ground. *Porrum* T. is a strong natural Genus, which even our Cooks do not confound with *Allium,* easily defined by its distinct Filaments, the alternate ones very broad and

2-cuspidated. *Cepa* T. though very similar in its Fruit to *Porrum* has Filaments confluent into a little saucer and totally different Habit, both Leaves and Stem being round and inflated. *Phyllodolon* next is so very like *Cepa* in its Leaves and Stem that I am loth to dissever them; yet they differ materially, the Petals of the former being gnawed and setaceous at their point; Filaments hardly at all dilated; and it has a totally different Inflorescence consisting of a simple Head, the upper Pedicels flowering down gradually from the top to the bottom without any partial Bractes to each. *Camarilla* has hypogynous Filaments inserted quite distinct from each other in the Receptacle, and is remarkable for the sinusses of its Pericarpium being vaulted like a Gothic arch over the melliferous Pores, which in *Porrum* are concealed by a truncated Membrane. *Schœnissa* is an alpine Genus, with oblong Bulbs growing close together in large patches; its Leaves are more or less cylindrical like those of *Juncus*, and its Petals very glossy; the sinusses of its Pericarpium are a little vaulted over the melliferous Pores, but not so much as in *Camarilla*. *Butomissa* differs chiefly from *Schœnissa* in its Petals coalescing higher and so recurved at their disjunction as to leave wide sinusses; the alternate ones are much narrower; and its Pedicels all nearly of equal length. *Hylogeton* is the only Genus of the Order yet known with caducous Petals; my name alludes to the groves and thickets which this beautiful vernal Plant inhabits, but if bruised or even slightly trodden upon, its abominable effluvia fill the whole vicinity. *Molyza* is distinguished by its bright yellow stellated Petals, becoming rather larger than smaller as they fade, and finally hard as parchment round the ripe Fruit. In *Canidia*, so named from its fictitious magical qualities, the Petals also become hard and tough at last; and the dissepiments of its Pericarpium are very broad; being the only Genus of the Order yet known to me with many Seeds in each Cell, I formerly placed it after *Oligosmeæ*, but now believe the similitudes of its floral Envelope and male Organs, must prevail over those of the Fruit and Seeds; the latter however I have never seen ripe. *Iulus* has pubescent Leaves, its alternate Petals smaller, short wedge-shaped Filaments, and a very small 3-lobed Stigma. *Saturnia* of Maratti has also pubescent Leaves, and is beautifully characterized by the broad dissepiments of its Pericarpium being opposite to the prominent lobes, as in *Asphodelus*. Lastly, *Briseis* differs from every other Genus here, in its extremely narrow Filaments inserted in two series, and arillated Seeds; its Leaves are so sharply keeled as to appear triangular like those of *Carex*, and its Peduncle which is triangular soon bends down to the ground from the weight of its Fruits.

Clas. 6. Spathaceæ L.

A perennial Bulb, tunicated or a little scaly; Flowers fasciculated by the depression of a simple Spike, even when very numerous, for the outer ones invariably expand first, quite sessile or pedicellated within one or more common spathaceous Bractes, besides a partial one to each Flower in many Species: the floral Envelope or Recep-

tacle staminiferous, the former being often splendid and fragrant: and what hitherto appears essential to the Class, a Pericarpium completely inferum, distinguish *Spathaceæ*. LINNÉ was thoroughly acquainted with the importance of all these characters, but having in his Philosophia Botanica proscribed the first, second, and third, as of no Generic value, when it became necessary to employ them, he pretended to keep up some show of consistency by calling their Bractes a Calyx; a gross deception unworthy of so great a man; for they are situated under the Pedicels, differing in nothing whatever from those of many other Vegetables. A very little experience must convince any practical Botanist, that the Bractes are often similar to the Calyx, as well as of equal generic weight; and LINNÉ himself tacitly confesses the great influence, which the Organs of Vegetation, as well as those of Reproduction, ought to have in all our synthetic arrangements, whether great or small, when he says, "*Habitus occulte consulendus est.*"

Ord. 1. GALANTHEÆ.

Pericarpium ovale vel subrotundum, plus minus 3-lobum, 3-loculare, carnosum et demum coriaceum, vel membranaceum, 3-valve disco apicis deciduo vel manente. Petala plus minus inæqualia, regularia aut in unâ secundum TENORE irregularia, marcescentia. Filamenta 6, disco spongioso pericarpium coronante infixa, subulata, a petalis et inter se penitus discreta. Antheræ foramine versus basin angusto dehiscentes, valvis non reflexis. Stylus nunc superne tumidus. Stigma angustum, vix lobatum. Semina 5–13 in singulis loculis, sessilia, obovata, albuminosa; Tunica nigra, crustacea vel membranacea, lucida; Embryo curvus, cruciformis vel clavatus; Rima juxta radiculam cuneata. *Herbæ* 6–18-*pollicares. Stipula albida, vaginalis, truncata ut in* Narcisso. *Folia* 3–6, *angustissima late loratave, fine veris aut æstate evanida. Flores cernui, parum odori. Fasciculus* 1–7-*florus, laxus. Pedunculus ante folia vel simul eorum medio prodeuns, solidus, nunc valde compressus. Pedicelli debiles. Bractea* 1 *spathacea, interioribus sæpe ramentaceis.*

Galanthus, J. L. Pericarpium coriaceum, parum dehiscens. Petala 3 exteriora patentissima, immaculata; 3 interiora multo breviora, convergentia, obcordata disco apicis maculâ viridi. Antheræ filamentis confluentes, cuspidatæ, breviter foraminosæ. Stylus sensim attenuatus. *Herbæ in* Switzerland, Hungary, *prope* Napoli, *regionibus* Caucasi, *nemorosis udis*, 7–10-*pollicares. Bulbus magnitudine* Avellanæ. *Folia* 2–4, *glauca, lorata. Flos* 1-*rius, niveus. Pedunculus cum foliis novis, anceps, in fructu dejectus. Species* 2. G. Nivalis L. Latifolius MS. *fig. in Bot. Mag. No.* 2162. *Præter has confer* 3-*tiam a* TENORE *descriptam in Fl. Nap. p.* 140. *Petalo uno exteriorum cæteris majore forsan sui Generis.*

Leucoium. J. L. TH. Pericarpium coriaceum, parum dehiscens. Petala conniventia, subæqualia, omnia disco apicis maculâ viridi aut fulvâ. Antheræ vacillantes, obtusæ, longe foraminosæ. Stylus superne tumidus. *Herbæ in* Dauphiné, Austriâ, Carpathiâ, *pratis udis*, 7–18-*pollicares. Bulbus in aliis magnitudine Ovi* Gallinæ.

Folia 3–6, *læte viridia, lorata. Flores albi. Pedunculus cum foliis, crassus, nunc admodum compressus, anceps,* 1–7-*florus. Pedicelli in fructu penduli. Species* 4. L. Æstivum L. Pulchellum P. L. Carpaticum MS. *fig. in Bot. Mag. No.* 1993. Vernum L.

Acis P. L. Pericarpium membranaceum, late dehiscens. Petala conniventia, subæqualia, 3 exteriora vel omnia retusa cum mucrone, disco apicis immaculata. Antheræ vacillantes, emarginatæ, longe foraminosæ. Stylus sensim angustior. *Herbæ in* Portugal, *utrâque orâ* Mediterranei *maris, et Ins.* Corsicâ, *arenosis,* 5–7-*pollicares. Bulbus magnitudine Avellanæ minoris. Folia* 3–5, *viridia, humifusa, angustissima, linearia, glabra. Flores albi cum rubore ad basin, cernui, inodori. Pedunculus ante folia vel simul ad latus, teretiusculus,* 2–5-*florus, succo luteo amaro. Pedicelli in fructu erecti. Nomen Poeticum, petalis basi quasi cruore infectis. Species* 3. Leucoium Roseum LOIS. Grandiflorum VENT. Autumnalis L.

These cheerful harbingers of autumn and spring may be known from all other *Monocotyledones* by the fungous disc covering their Pericarpium, into which the Filaments are stuck like Pins, quite separate both from the Petals and from one another. SOLANDER thought them allied to *Strumareæ*; from which they differ however very materially in the figure of their Filaments, Anthers, Style sometimes swelled towards its top, and especially in their Seeds, which are albuminous with a black shining Coat, and the chink of their Embryo through which the first Leaf protrudes is wedge-shaped: their geographical limits also confirm me in detaching them as an Order, none having yet been observed in the *Southern* Hemisphere. *Galanthus Nivalis* L. now grows perfectly wild among the bushes of a rocky Bank, which separates the common Wood in the township of *Hipperholme* near *Halifax* in *Yorkshire,* where I saw it last year; the place is so steep as to be almost inaccessible, and though very luxuriant it grew sparingly, that I have no doubt its Bulb or Seeds had been carried up there by some Bird, or possibly a Field Mouse, from one of the neighbouring gardens. *Galanthus Latifolius* has lately been sent to this country from *Govenki*; its Flower hitherto has not proved larger than that of *Nivalis,* and its inner Petals are rather smaller in proportion to the outer, but its Leaves are much broader besides other differences. Another species of this Order, which L'ECLUSE received from IMPERATO, if TENORE's description be correct, is probably sui Generis, and may be called after him, though he only regards it at most as a Species, inserting it in his work as a variety. His words are "*La varietà β è in tutte le sue parti il doppio piu grande della prima, ed uno de' petal esterni è sempre piu grande degli altri due.*" He says the Flowers of *Nivalis* appear at *Naples* in *February,* but of this not till *April* or *May,* and that he found it where "*Ferrante Imperato l'avea raccolto a Monte Virgine*"; lastly he adds, that "*per la forma de' petali, la diversità del tempo della fioritura, e l'intero abito, forse potrebbe formare una nuova Specie.*" *Leucoium* is characterized by its swelled Style and more equal Petals, constant in all the four Species. *Acis* differs widely from *Leucoium* in having very narrow grass-like Leaves, Petals unspotted, Anthers

splitting nearly to the base, Style gradually attenuated, Capsule membranaceous, splitting widely into 3 horizontal valves, with the Embryo of its Seeds short and more club-shaped.

Ord. 2. OPORANTHEÆ.

Pericarpium ovale, carnosum, demum coriaceum, 3-loculare, sub apice 3-valve. Petala 6, in Tubum ore nudum, nunc basi hypogæum marginibus coalita, dein in Limbum regularem disjuncta oblonga, interiora minora, marcescentia sed fructu maturo pene evanida. Filamenta 6, infra os tubi quem basibus erectis claudunt 1 serie inserta, subulata, regularia, interioribus opposita longiora. Antheræ vacillantes, 2-loculares, 4-valves. Stylus erectus vel parum reclinatus. Stigma capitatum 3-lobum. Semina 9–13 in singulis loculis, septis 2-plici serie imbricata, sessilia, nunc arillo cincta; Tunica nigra, membranacea; Albumen durum; Embryo juxta Hilum. *Herbæ in utrâque orâ Maris* Mediterranei, Græciâ et Persiâ, 6–10-*pollicares. Bulbus ovatus, Tunicis membranaceis. Stipulæ* 2–3, *vaginales, truncatæ. Folia* 3–6, *bifaria, glauca aut viridia, lorata, per æstatem evanida. Flos luteus, erectus,* 1-*rius, parum odorus. Pedunculus ex* 1 *alterave axilla foliorum interiorum, nunc ante folia, erectus, post florescentiam in terram curvus, parum anceps, solidus. Bractea* 1-*ria, spathacea obtusa. Pedicellus brevissimus vel nullus.*

Sternbergia KITAIB. Corollæ Tubus longus basi hypogæus: Laciniæ patentes, spatulato-lanceolatæ. Semina Arillo albo cincta. *Herbæ prope* Buda Ors, *in* Tauride, Persiâ, *calcareis aridis,* 5–7-*pollicares. Bulbus magnitudine Ovi* Columbæ. *Folia cæsia, anguste lorata, plus minus torta, initio æstatis evanida. Flos luteus, ante folia autumno prodeuns. Pedunculus vere ad latus foliorum parum emergens, compressus. Species* 2. S. Colchiciflora KITAIB. Amaryllis Clusiana KER. *An huc* Amaryllis Exigua SCHOUSB.?

Oporanthus L'ECLUS. Corollæ Tubus brevis: Laciniæ incurvo-patentes, obovato-lanceolatæ. Semina ignota. *Herbæ in* Espana, Peloponneso, *circa* Aleppo *montibus,* 6–9-*pollicares. Bulbus magnitudine Ovi* Gallinæ. *Folia* 4–6, *læte viridia, recurvo-patentia, lorata, glabra, fine veris evanida. Flos luteus, levi halitu ut meis naribus videbatur* Sulphuris. *Pedunculus mox post folia axillâ interiorum, nunc* 2, *multo brevior et peractâ florescentiâ deorsum arcuatus, anceps. Species* 2. Amaryllis Lutea L. Citrina SIBTH.

LINNÉ only knew one of these Plants, and joined that to his *Amaryllis*; but their real affinity according to my judgment was long ago perceived by L'ECLUSE, who referred them to *Narcissus*, with which they agree in almost every point, except the Crown of the floral Envelope. That a very great likeness may exist in the floral Envelopes of both *Dicotyledones* and *Monocotyledones* without any immediate relationship is proved by *Physalis* and *Convolvulus, Datura* and *Portlandia, Begonia* and *Hydrocharis, Colchicum* and *Crocus, Ranunculus* and *Alisma, Dracontium* and *Potamogeton*: and while the regular Petals, insertion of Filaments below the mouth of the Tube, and albuminous Seeds with a black membranaceous Coat, remove *Oporantheæ* to a considerable distance from *Amaryllideæ*;

the first and second of these characters in conjunction with their truncated sheathing Stipules, solid Peduncles, and absence of any coronary process whatever in the mouth of the Tube, distinguish them sufficiently from *Zephyrantheæ*. In geographical situation likewise they are confined to the countries bordering the *Mediterranean* and *Caspian* Seas, although not directly maritime plants. I only yet know *Sternbergia* by KITAIBELS work; its Flower appears long before the Leaves, in autumn; the Tube of its Corolla is long, continuing partly underground, like that of *Colchicum*, till the Fruit is ripe; he describes its Filaments "*cum tubo et inter se sub fissuris Corollæ connata*" which if precisely so would be an anomaly hitherto unknown in *Monocotyledones*; but he no doubt only means that the Filaments are inserted lower than the fissures, not opposite to them. *Amaryllis Clusiana* of *Mr*. J. B. KER certainly belongs to this Genus, its Seeds being embedded in a white Arillus; and KITAIBELS Plant blossomed in *Mr*. GRIFFIN's choice collection, during my absence in *Yorkshire*, but it does not yet thrive or encrease here. *Amaryllis Lutea* L. differs so materially from *Sternbergia* that I separate it by L'ECLUSE's name of *Oporanthus*; the Tube is very short, and Filaments inserted a little below the middle of it, erect at the base so as to close the orifice completely round the Style; its Flowers appear soon after the Leaves are fully developed in *November*, issuing from an inner Axil though at first they appear central from being included in one common sheathing Stipule; they have I fancy a very slight sulphureous smell, like that of *Corbularia*; in our cold country, its Seeds I believe never ripen and they are yet unknown.

Ord. 3. NARCISSEÆ.

Pericarpium oblongum, plus minus 3-lobum, 3-loculare, membranaceum, ab apice 3-valve. Petala 6, inferne coalita: Tubus brevis longusve, figurâ varius, in Coronam brevissimam longissimamve desinens: Limbus repente tubo disjunctus et ejus pariete tenuior, regularis, varie expansus: marcescentia sed dum Fructus maturescit plerumque evanida. Filamenta 6, intra Tubum varie inserta brevissima ut vix ulla longissimave, nunc cum Stylo fasciata et deorsum reclinata, a coronâ penitus libera. Antheræ vacillantes, 2-loculares, 4-valves. Stylus cylindricus vel attenuatus. Stigma late 3-lobum. Semina 15–60 in singulis loculis, obovata: Tunica nigra, membranacea; Albumen durum; Embryo ad Hilum. *Herbæ a regione* Atlantis *per* Europam *in* Asiam Minorem *desinentes præter nonnullas forsan in* China $\frac{1}{2}$–2-*pedales, fere omnes vernales. Bulbus ovatus, Tunicis exterioribus scariosis. Stipulæ* 2–3, *vaginales, truncatæ. Folia* 2–6, *bifaria, angusta* Juncorum *vel lorata* Porri, *obtusa, per æstatem evanida. Flores nivei ochroleuci flavique, fragrantissimi vel graveolentes. Pedunculus medio foliorum adultorum, raro antea nudus, plus minus fistulosus,* 1–16-*florus. Bractea* 1, *apice sæpe retusa quasi e* 2 *conflata,* 1 *latere dehiscens; interiores fere constanter deficientes. Pedicelli in fructu erecti, angulati.*

Sect. 1. Corona circiter longitudine limbi, valde tumens. Filamenta longissima, cum Stylo fasciata et deorsum reclinata. *Folia viridia, angusta,* Juncorum.

Corbularia Hort. Tr. Corollæ Tubus obpyramidalis: Laciniæ tubo parum breviores, inter se distinctæ, cuneatæ: Corona 5–8 lineas longa, truncata vel 6-loba. Filamenta basi tubi fere 1 serie inserta. *Herbæ in* Morocco, Espana, Portugal, *juxta* Tarbes, *locis montosis,* 6–10-*pollicares. Folia humifusa vel erecta, teretia vel semiteretia. Flos flavus, parum nutans, halitu Sulphuris. Pedunculus mox post folia, teres, æquatus,* 1-*florus. Nomen a formâ Coronæ, unde nostratibus* Hoop Petticoat *audit. Species* 4. C. Tenuifolia, Obesa, Turgida Hort. Tr. Albicans Haw.

Sect. 2. Corona circiter longitudine Limbi, cylindracea ore dilatato. Filamenta longa, in conum convergentia. *Folia sæpius glauca, lorata,* Porri.

Ajax Hort. Tr. Corollæ Tubus obpyramidalis, brevissimus longusve: Laciniæ varie patentes, sæpius ovato-lanceolatæ et imbricatæ: Corona 1–2 pollices longa, varie lobata dentatave. Filamenta infra medium tubi fere 1 serie inserta, crassa. *Herbæ in* Portugal, Espana, France, Switzerland, *et* England, *dumetis montium udis,* ½–2-*pedales. Folia fere constanter glauca. Flos flavus vel lacticolor, nutans, sæpius graveolens. Pedunculus mox post folia, anceps, striatus,* 1-*florus. Nomen a magnitudine Coronæ inditum. Species* 10. A. Cuneiflorus, Pygmæus, Lacinularis, Grandiflorus, Obvallaris, Lorifolius Hort. Tr. Bicolor L. Festalis Prodr. Longiflorus, Patulus Hort. Tr. *quæ* Cydenin *connectunt.*

Sect. 3. Corona Limbo brevior, nunc multum. Filamenta sæpius brevissima et intra Tubum; vel omnia parum ultra ejus os. *Folia sæpius glauca, lorata,* Porri.

Cydenis. Corollæ Tubus tibiæformis; Laciniæ tubo longiores, incurvo-patentissimæ apicibus recurvis, lanceolatæ, basi imbricatæ: Corona 5–6 lineas longa, poculiformis, eroso-crenulata. Filamenta infra medium tubi 2 seriebus inserta, parum ultra os attingentia, convergentia. *Herba in montium* Pyrenees *vallibus humidis,* 1½-*pedalis. Folia glauca, parum torta, concava. Flos albidus, cernuus, grato odore* Narcissi. *Pedunculus mox post folia, anceps, striatus,* 1–2-*florus altero sæpius imperfecto. Species* 1. Narcissus Montanus Ker *in Bot. Reg. No.* 123, *nomen in Prodromo olim a me propositum, sed mutavit pro* Poculiformi *ipse* Banks.

Panza. Corollæ Tubus anguste infundibuliformis: Laciniæ tubo parum longiores, reflexo-horizontales, late ovales, imbricatæ: Corona 5–6½ lineas longa, poculiformis, repando-truncata. Filamenta medio tubi 2 seriebus inserta, os vix attingentia, erecta. *Herba e* France *anno* 1819 *ad Cl.* M'Leay L.S.S. *missa, pedalis. Folia parum glauca, latiuscula. Flos ochroleucus, nutans, inodorus. Pedunculus mox post folia, vix anceps, striatus,* 1-*florus.* Alfonzo Panza, M.D. *Botanicus a* L'Ecluse *commendatus. Species* 1. P. Bicolor MS.

Queltia. Hort. Tr. Corollæ Tubus calamiformis apice parum latiore: Laciniæ tubo longiores, incurvulo-horizontales, ovales, basi imbricatæ:

Corona 4½-7 lineas longa, figurâ varia, plus minus 6-loba. Filamenta supra medium tubi 2 seriebus inserta, decurrentia et valde prominentia, os vix attingentia, erecta. *Herbæ in vallibus montium* Pyrenees, *1½-pedales vel plus. Folia glauca. Flos ochroleucus, nutans, odore fere* Ajacum. *Pedunculus mox post folia, anceps, sæpe vix striatus, 1-florus.* NICOLAS LE QUELT, *Rhizotomorum princeps, qualis utinam hodie surgat. Species* 4. Narcissus Incomparabilis CURT. L. Aurantiaca HAW. Biternaceus, Pallida MS.

Patrocles. Schizanthes HAW. Corollæ Tubus tibiæformis: Laciniæ tubo parum longiores, incurvo-horizontales, lanceolatæ, vix imbricatæ: Corona 3½-4 lineas longa, calathiformis, 3-fida, erosa. Filamenta 3 medio tubi inserta, os fere attingentia; 3 sub ore, multo breviora; erecta. *Herba pedalis, Floristarum curâ ut opinor nata. Folia glauco-viridia. Flores ochroleuci, nutantes, odore* Queltianum. *Pedunculus mox post folia, anceps, striatus, 2-4-florus. Nomen ad suspicatum patrem* Queltium *referens, cum aliud Cl.* HAWORTH *jam occupatum sit. Species* 1. Narcissus Orientalis L. *fig. in Bot. Mag. No.* 948. *optima.*

Chione. Corollæ Tubus anguste infundibuliformis; Laciniæ circiter longitudine tubi, incurvulæ vel reflexiusculæ, lanceolatæ, vix imbricatæ: Corona 2-2½ lineas longa, poculiformis, subtrifida, eroso-crenata, tenera nec limbo crassior. Filamenta supra medium tubi 2 seriebus inserta, brevissima. *Herbæ juxta* Pisa, Napoli, *locis humidis, 10-14-pollicares. Folia glauca aut viridia. Flores nivei citrinive, nutantes, fragrantes, in unâ odore* Jasmini. *Pedunculus mox post folia, compressus, anceps, striatus, 6-11-florus. Nomen Poeticum. Species* 2. Narcissus Papyraceus, Italicus KER *in Bot. Mag. No.* 947 *et* 1188.

Hermione HORT. TR. Corollæ Tubus tibiæformis: Laciniæ longitudine tubi vel breviores, horizontales vel reflexiusculæ, plus minus ovatæ et imbricatæ: Corona 2-3 lineas longa, cupularis, repando-truncata vel lobata, nunc erosula, limbo crassior. Filamenta supra medium tubi 2 seriebus inserta, brevissima. *Herbæ in utrâque orâ Maris* Mediterranei, *1½-pedales. Folia plerisque glauco-viridia. Flores albi ochroleuci flavique nutantes, graveolentes. Pedunculus mox post folia, sæpius anceps et striatus, 3-16-florus. Nomen Poeticum. Species* 9-10 *sub* Narcisso Tazetta L. *confusæ exclusis floristarum. Typus est* N. latifol. simplex in CLUS. *Hist. Pl. lib.* 2. *p.* 154. "*omnibus fere circa Monspelium pratis.*"

Plateana. Omnia ut in *Narcisso* infra, præter Coronæ oras non scariosas et Pedunculum 3-5-florum. *Herba 1½-pedalis, ut opinor in pulvinis floristarum nata. Folia parum glauca. Flores albidi, odore grato* Narcissi. JAQUES PLATEAU, Tornacensis, *a* L'ECLUSE *commendatus. Species* 1. Baselman major TREW *Seligm t.* 23.

Narcissus J. L. TH. Corollæ Tubus calamiformis apice summo parum dilatato: Laciniæ circiter longitudine tubi, varie expansæ, ovales aut obovatæ, sæpius imbricatæ; Corona 1-1½ lineam longa, acetabuliformis, crenulata, plicata, oris scariosa. Filamenta plus minus juxta os tubi 2 seriebus inserta, brevissima. *Herbæ in* Languedoc, Dauphiné, Græciâ, *pratis humidis, 1-1½ pedales. Folia glauca aut viridia.*

Flores nivei vel ochroleuci, nutantes, fragrantissimi. Pedunculus mox post folia, anceps, striatus, 1- *rarius* 2-*florus. Species* 5. N. Serotinus PARK. Poeticus HORT. TR. Patellaris, Radiiflorus PRODR. Biflorus CURT. *qui rectius* Hybridus *appellandus, pericarpio ovis constanter destituto.*

Veniera. Corollæ Tubus tibiæformis: Laciniæ tubo multo breviores, reflexo-horizontales, late ovales, valde imbricatæ: Corona 2 lineas longa, acetabuliformis, repando-crenata, plicata, oris non scariosa. Filamenta 3 medio tubi 3 juxta os inserta, brevissima. *Herba in* Rovergue, 8–12-*pollicaris. Folia viridia,* 1½–2 *lineas lata nec tamen* Juncorum, *dorso sulcata. Flores ochroleuci, nutantes, odore* Narcissi. *Pedunculus mox post folia, quasi ob debilitatem arcuatus, teretiusculus, striatus,* 1–2-*florus.* JOACHIM LE VENIER Burdigalensis, "*humanissimus et eruditissimus*" *Botanicus, hanc plantam inter multas alias detexit. Species* 1. Narcissus Tenuior CURT. *in Bot. Mag. No.* 379.

Sect. 4. Corona limbo brevior, nunc multum. Filamenta sæpius brevissima et intra tubum, nunc 3 longa et ultra os. *Folia viridia, angusta,* Junci.

Ganymedes HORT. TR. Corollæ Tubus tibiæformis: Laciniæ tubo longiores vel breviores in eodem fasciculo, recurvæ et tortæ instar Cyclaminum, lanceolatæ: Corona 3–6 lineas longa, figurâ varia. Filamenta 3 plus minus juxta medium tubi inserta, brevissima; 3 sub ore, longa, nunc usque ad apicem coronæ. *Herbæ prope* Oporto, *in* Galiciâ et *Insulis* de Glenan, 8–14-*pollicares. Folia parum glauca aut viridia, semiteretia, dorso sæpe striata. Flores nivei ochroleuci luteive, odore levi* Jonquillæ. *Pedunculus mox post folia, teres, æquatus,* 1–7-*florus. Nomen Poeticum. Species* 5. G. Cernuus, Effusus, Pulchellus HORT. TR. Triandrus L. Concolor HAW. *vide Tabb.*

Philogyne. HORT. TR. Corollæ Tubus anguste infundibuliformis. Laciniæ tubo longiores, horizontales, ovales vel obovato-lanceolatæ, nunc basi distinctæ: Corona 4–7 lineas longa, figurâ varia. Filamenta juxta medium tubi 2 seriebus inserta, os fere attingentia, circa stylum convergentia unde nomen. *Herbæ in Ins.* Corsica, Dauphiné et Galicia *pratis montanis,* 1–1½-*pedales. Folia viridia, semiteretia vel teretiuscula. Flores flavi, nutantes, debili odore Jonquillæ. Pedunculus post folia, teretiusculus, vix striatus,* 1–3-*florus. Species* 3. P. Conspicua HORT. TR. *Theatr. Fl. t.* 22. *bona.* Calathina HORT. TR. *fig. in Bot. Mag. No.* 78. Heminalis HORT. TR. *cujus fig. hodierna desideratur.*

Tityrus. Corollæ Tubus tibiæformis: Laciniæ tubo multo breviores, horizontales, ovales vel obovatæ, nunc vix imbricatæ, interiores latiores: Corona 1½–2 lineas longa, cotyliformis, 6-loba interstitiis alternis sæpe brevioribus. Filamenta supra medium tubi 2 seriebus inserta, brevissima. *Herbæ in* Algarve, Andulasia, Provence *locis humidis,* 1–1½-*pedales. Folia viridia, teretiuscula vel semiteretia. Flores lutei, odore* Mellis *vel in unâ* Jasmini *fragrantissimi, nutantes. Pedunculus post folia, teres compressusve, non anceps, æquatus,* 1–7-*florus.* τιτυρος *calamus. Species* 5. Narcissus Jonquilla L. Similis PRODR. Bifrons, Compressus, Primulaceus HAW.

Prasiteles. Corollæ Tubus tibiæformis: Laciniæ tubo breviores, incurvulo-horizontales, anguste cuneatæ, basi distinctæ: Corona ⅔–1 lineam longa, e Squamis 6, retusis, crassis constans. Filamenta supra medium tubi 2 seriebus inserta, brevissima. *Herba in* Morocco, *isthmo inter* Gibraltar *et* St. Rocque, *locis humidis, pedalis vel ultra. Flores prasini ; fere instar* Moschariæ *fragrantissimi. Pedunculus ante folia sero autumno, teretiusculus, æquatus,* 1–5-*florus. Folia glauco-viridia, teretiuscula, fistulosa.* πρασινος *prasinus,* τελεος *perfectus. Species* 1. Narcissus Viridiflorus Schousb. *Beob. p.* 142. *t.* 2.

Argenope. Corollæ Tubus tibiæformis: Laciniæ circiter longitudine tubi, horizontales, anguste lanceolatæ, basi distinctæ: Corona vix 1 lineam longa, cotyliformis, repando-crenata. Filamenta supra medium tubi 2 seriebus inserta, brevissima. *Herba prope* Tangier *abunde, in* Andalusia, Granada, *collibus argillaceis,* 6–12-*pollicaris. Flores nivei, ut videntur in Icone pulcherrimâ Cl.* Desfontaines *erecti. Pedunculus ante folia autumno, subanceps, striatus,* 1–7-*florus ; mox Florescentiâ admodum tarde pergente ut monet* Schousboe. *Folia erumpunt* 1½–2 *lineas lata, viridia, linearia, canaliculata.* αργενος *albus,* ωψ *vultus. Species* 1. Narcissus Serotinus L.

Many Botanists of the present day may be of opinion that these Plants do not constitute a legitimate Order, and whether mine or theirs be hereafter followed is of little importance, provided each Species is placed where its most striking similitudes demand. I shall probably be still more reproached for dividing them into Genera, though these are often so obvious and decided, that our vulgar Clowns have given names to them; nor will a *Daffodil, Hoop Petticoat, Jonquil,* or *Primrose Peerless,* ever be confounded by those genuine followers of Nature. Therefore after quoting an Adage, which is particularly applicable to this case, "*male agitur cum Domino quem Villicus docet,*" I have only to say, that if every Class Order Genus and Species could be distinguished by characters of equal value, this very uniformity, however suited to such as are doomed to plod over the dull formal track of Linné, could not fail to disgust every one, who has rambled through the cheerful winding path of A. L. de Jussieu. In fact, the Creator among those of his works which we are permitted partly to know has combined the living Herbs into Groupes; as varied in shades of affinity, as the tints of their Flowers; and a truly philosophical student, after attempting peradventure not entirely without success to measure some of their intervals, finds a commodious resting place in any of them, when fatigued with the multiplicity of lovely objects before him. *Narcisseæ* amount at present in numbers to about 60 Species, exclusive of varieties; and may be distinguished as an Order, by their Petals coalescing suddenly, not gradually like those of *Oporantheæ, Amaryllideæ,* and *Zephyrantheæ,* into a Tube, the orifice of which is prolonged into a Crown of various forms and dimensions; and they are of a much thinner substance at the point of junction than the coalesced part below. Their Filaments are inserted higher or lower in the Tube, but invariably below its orifice, never cohering with the Crown, in some Genera so short that the Anthers are almost sessile, in others

very long, regular or irregular even though the floral Envelope remains regular. Their Seeds are indefinite in number, albuminous, with a black membranaceous coat and form a double row on the margins of the dissepiments in a 3-locular Capsule. Their Peduncles issue from the center of the Bulb, any which appear lateral, belonging to an offset. Their Leaves are green and narrow like *Rushes*, or broad and strap-shaped like those of a *Leek*, constantly bifarious at the base, vegetating during winter and spring, but decaying as soon as the Heats of summer commence. All yet known have 2 or 3 truncated Stipules sheathing the Leaves as well as regular Flowers; and that profound Botanist CORREA DE SERRA, the rays of whose setting Sun are at this moment gilding our metropolis, when formerly at *Mill Hill*, after pondering over many Species which I cultivated there, remarked, "*this is a Catholic Genus, for the Trinity in Unity is always present, and not one among them has an irregular Flower, though it bows down most religiously.*" An approach to irregularity nevertheless occurs in one Genus, which he did not then see in blossom, its Filaments and Style being reclined: on the contrary in the following Order of *Pancrateæ* though their Flowers are generally quite erect, the Filaments of some Species and the Style of nearly all, bend more or less towards the lower side. I divide *Narcisseæ* into 4 Sections; the 1st of which only contains a single Genus, *Corbularia*: this has an obpyramidal Tube and very large swelled Crown, which has suggested the name; Filaments and Style reclined and approximated closely into one Bundle; Leaves green, very narrow like those of Juncus, yet differing so much, that even a novice in Botany, may by them tell one Species from another. *C. Tenuifolia* has the most slender Leaves of any, quite erect, and a regularly 6-lobed plicated Crown; this grows wild in the mountains of *Biscay*, and though hardy should be planted in sheltered situations of pure loamy soil; for its Leaves come up in autumn and are often injured by those hard Frosts which set in here without a previous fall of snow; I first met with it forty years ago in the then unrivalled nursery of *Mr.* JAMES GORDON at *Mile-end*, who introduced it from *Holland* in 1760; and though after encreasing it at *Chapel Allerton*, I distributed bulbs of it plentifully among my friends and neighbours, it is now rarely seen. *C. Obesa* has slender Leaves, but rather broader than *C. Tenuifolia*, and spreading flat on the ground immediately after they push forth, as it is faithfully represented in some of the ancient Wooden Cuts; with a truncated Crown somewhat winding, but never divided into equal regular lobes; this being indigenous in the warmer countries of *Portugal Spain* and *Morocco*, from whence BROUSSONET sent me Bulbs of it, is consequently more tender, yet will live in the open air with a little protection, and thrives admirably in pots under a Cucumber Frame, if that be sufficiently covered up during severe Frost. *C. Turgida* grows wild near *Tarbes* in *France*, and is so hardy as to live in the open ground without the slightest protection; its Leaves not coming out of the ground till spring; they are much larger, than in either of the preceding Species, of a shining grass green, quite erect for some time, till at last from

their length they bend down at the top; its Crown is still more truncated and entire than in *C. Obesa.* I cannot retain LINNÉ's specific name of *Bulbocodium* for this plant, which he has not only applied very unjustifiably to a Genus allied to *Colchicum*, but employed a third time, as a specific name in *Ensatæ. C. Albicans* of HAWORTH, called *White Trompet marin* in *Dutch* catalogue, is thought by some a pure variety of *Obesa*; never having seen this living, I cannot venture to determine any thing from his dried specimen, but he is very probably correct in separating it, justly observing under *Queltia*, that "*colour is remarkably important in the discrimination of Narcisseæ.*" The 2nd Section of *Narcisseæ* is likewise limited to a single Genus, but which is abundant in Species and varieties of those Species; its Crown is cylindrical, and so long, sometimes exceeding even the Petals, that I call it *Ajax*; its Filaments are very thick, reaching more or less beyond the Tube and converging round the Style into a Cone; the Leaves are without exception lorate, and generally glaucous, very like those of Porrum. *A. Patulus* and *Longiflorus*, confounded by LINNÉ under the name of *Moschatus*, exhale a delightful perfume one like Citron the other zingiberaceous, from their milk-white Flowers; while those of all the other species have more or less of a narcotic smell. Besides this narcotic smell however of the Petals, certain individual Bulbs of *A. Festalis*, and of another Species which GOUAN found in the mountains of *L'Esperon*, possibly *A. Grandiflorus*, have a totally different and agreeable perfume, in GOUAN's Plant approaching he says to that of *Syringa* L. but in *A. Festalis*, to that of those *Primulas* which the Florists have produced and called *Polyanthi.* This perfume in our indigenous Plants is strongest when the Crown begins to open, clearly proceeding from the inside of that organ, and not from the outside or its Petals; and if not exhaled by its Honey, may possibly belong to the Pollen, which remains to be enquired into. I noticed that one of these Bulbs with sweet-smelling Flowers being transplanted into my garden always ripened Seeds, while another from the same field with Flowers of the usual narcotic smell, very seldom did. I have met with this perfume in Bulbs of various counties and soils; in *Devonshire*, in *Kent* on chalk, at *Mill Hill* near *Hendon* on gravelly loam, in alluvial meadows close to the River *Derwent* near *Derby*, at *Sutton Colefield Warwickshire* which I visited solely because RAY had gathered it there, and lastly in the mountainous copses of my own county *Yorkshire*, both on Limestone and Freestone plentifully. In the 3rd Section of *Narcisseæ*, the Crown varies in length, but is always shorter then the Limb, or exceedingly short. Filaments often so short that the Anthers appear sessile; Leaves generally glaucous and lorate, as in the 2nd Section. Here *Cydenis*, which I now separate from *Queltia* with much confidence approaches in colour and partly in perfume to *Ajax Patulus*; and this beautiful Plant requires a deep moist soil; for on a dry gravel, its Flowers are seldom perfect. *Panza* I believe also to be sui Generis, but it approaches nearer to *Queltia*, though very different in its Crown; for this Plant I am indebted to ALEXANDER M'LEAY, *Esq.*, the worthy secretary of the

Linnean Society who received bulbs of it from *France* in 1819, but what part it grows naturally in, is not yet known here. The *Nonsuch* or *Incomparable Daffodil* I have devoted to the memory of Nicolas Le Quelt, a *Parisian* rhizotomist; its Flowers have a strong unpleasant smell, with a large crown and quill-shaped Tube; 4 or 5 Species I believe may exist, and *Semipartita* of Haworth is unquestionably distinct, but I cannot learn where it grows wild, and am suspicious of everything which comes from the gardens at *Haerlem*. *Patrocles*, which I referred to *Hermione* in the Horticultural Transactions on account of its multiflorous Peduncle and insertion of Filaments, has been justly established as a Genus by Haworth with the name of *Schizanthes*; but that being already given to another Genus by Ruiz and Pavon its relationship to *Queltia* is alluded to in mine; this plant I cannot help suspecting will turn out to be a production of the *Dutch* florists; *Mr*. J. B. Ker in the 948th number of the Botanical Magazine is mistaken respecting its synonyms. Bulbs of it having been sent with the name of *Orientalis*, to the late *Dr*. Hope, and to old *Mr*. Lee of *Hammersmith* from the *Upsal* garden by Linné himself, as they both assured me. Under *Chione* I now also remove from *Hermione* two perfectly natural Plants indigenous near *Pisa* and *Naples*, differing in the very delicate consistence of their Crown, as thin or thinner than the Petals, as well as very small and crenulated; and this thin Crown distinguishes them from all *Narcisseæ* whatever yet discovered. In *Hermione* on the contrary the substance of the Crown is thick and strong, remaining fresh after the Petals begin to decay, variously gnawed or truncated, but never finely crenated; I make L'Ecluse's first species, which grows wild abundantly in the meadows about *Monpellier* the type, and this extensive Genus serves as a sink for the numerous mongrels annually imported from *Holland* to ornament the *London* Balconies. Under *Plateana* I now only detach *Baselman major* of the *Dutch* florists, well figured in the 940th number of the Botanical Magazine, and approaching both in the fragrance of its Flowers and structure of its Crown most closely to *Narcissus*, but the Crown is not scarious, and Haworth informs me that one or perhaps two more Species exist. *Narcissus* of Virgil and Theocritus is characterized by a quill-shaped Tube, and the finely crenated scarious margin of its Crown, with almost sessile Anthers; the Flowers exhale a delightful and similar fragrance in every Species, and are generally solitary; this 1-florous tendency is often contradicted by *Biflorus* of Curtis, an Eunuch certainly in its female Organs and nearly so in its males; from being disseminated all over the western parts of *Europe*, it may be one of Nature's mules, but I have not met with any Botanist who has seen it wild; in *Great Britain* it is only found in gardens and orchards, where it has evidently been planted. In the Horticultural Transactions I have retained the name of *Poeticus* for a species sent to me from *Languedoc*; this in our gardens blossoms immediately after *Radiiflorus*, and is the same with a specimen of Sherard's; however as it is not positively certain that this specimen of Sherard's was gathered in *Greece*, I would still keep the name of *Poeticus* in abey-

ance for that species which actually does grow wild in *Greece* whether it be this or not; for nothing is more desirable than to preserve ancient names, when they can be authenticated, and thus *Cyaneus* is far preferable to *Nelumbium.* After *Narcissus, Venièra* by its narrow Leaves, and slender Peduncle hardly able to sustain the weight of a second Flower which is often added, introduces the remaining Plants of the Order; its Petals are very broad, Tube shaped like a Clarinet, Crown plicated and finely crenulated, but not being scarious at the margin, cannot be joined to *Narcissus*; it is named after JOACHIM LE VENIER, a most liberal and skilful Botanist of *Bourdeaux*, who discovered it growing wild in *Rovergue*, and to whom at this distance of time we are indebted for many other bulbous Plants in our gardens. In the 4th Section of *Narcisseæ*, the Leaves are narrow, generally green, and like those of *Juncus*: in other points it agrees with the 3rd Section. Here, *Ganymedes* by its reflexed twisted Petals puts us in mind of a *Dicotyledonous* Genus *Cyclamen*; its Filaments are remarkably unequal, 3 of them so short that LINNÉ called a species faithfully described and figured by L'ECLUSE, *Triandrus*; this has been introduced in 1819 by *Mr.* WILLIAMS nurseryman at *Turnham Green*, and has snow white Flowers with a very long Style. *G. Effusus* has a short truncated winding Crown darker than the Petals, which are not quite so much reflexed as in the other Species, and all its 6 Anthers are nearer to one another the three upper only just protruded beyond the orifice of the Tube; it is *Nutans* of HAWORTH, but certainly not *Narcissus Trilobus* of LINNÉ, to which *Mr.* J. B. KER most unaccountably refers it in No. 945 of the Botanical Magazine, and as that figure hardly gives a correct idea of it, the Crown being too regularly 6-lobed, I here add another, in *Tab.* . *G. Concolor* approaches very closely to *Effusus*, from which nevertheless it may be easily distinguished when living by the colour of its Crown nearly or quite as pale as the Petals, and the latter are more reflexed; its 3 upper Anthers more remote from the 3 lower help to discriminate it when dried in an Herbarium, and its Style projects still farther beyond the Crown; see *Tab.* *G. Pulchellus* has a Crown paler than the Petals, very equally 6-lobed, and its Style never reaches so high as the orifice of the Crown; this is the most hardy species of all, but does not relish the manured soil about *London*, seldom producing more than one or two miserable Flowers, such indeed as are faithfully represented in No. 1262 of the Botanical Magazine; another figure of a more healthy specimen is therefore given in *Tab.* . All these plants require a light loamy soil without manure, in which they produce plenty of Flowers and increase fast; but I could not get them to thrive in the dry gravelly earth at *Mill Hill*, and strong Bulbs, which I repeatedly sent to my lamented friend, the late *Mr.* GEORGE ANDERSON never produced such trusses of Flowers afterwards, in his garden, as they did the first year after their removal from *Chapel Allerton*. *Philogyne*, the next Genus, is abundantly distinguished by its converging Filaments all nearly equal in length, and inserted near the middle of the Tube, which is truly funnel-shaped; all the Species are very

hardy ornamental Plants, and though will succeed even in a sandy dry soil, are still bolder and stronger in moist loam. Of *P. Conspicua* no modern figure has yet been published so good as that in *Theatrum Floræ, t.* 22. it is not described by L'ECLUSE or PARKINSON, and the oldest specimen I have seen in any Herbarium was gathered at *Eltham* in 1720, not long after it had been introduced by *Consul* SHERARD, probably from some part of the *Mediterranean* coast, for LASALLE found this species growing wild in the *Island of Corsica*; but it is not indigenous that I can ascertain in the north of *Spain*; though it is unquestionably the *Narcissus Odorus* of LINNÉ's Herbarium I cannot retain so absurd a name; for it has very little perfume, more especially as it is not the *Odorus* of his Species Plantarum. *P. Calathina* was determined by LINNÉ in Species Plantarum from L'ECLUSE's account, there quoted, without having seen it; this Plant L'OBEL tells us was discovered in the mountains near *Compostella* by NICOLAS LE QUELT, and I received Bulbs of it brought by *Mr.* RICHARD RAMSDEN BRAMLEY of *Leeds*, from some part of *Spain*, who went there to buy wool; it is also *Narcissus Trilobus* of LINNÉ's Herbarium but from what Plant he added the contradictory description under the latter in Species Plantarum, I cannot unravel. *P. Heminalis* has not yet been figured in either of those popular and most useful works, the Botanical Magazine, and Botanical Register, though often brought to *Covent garden* for nosegays, by the market gardeners; its Petals are more lanceolate than in *P. Calathina*, Crown more oblong, truncated, winding but not at all lobed; this species grows wild in *Dauphiné* and *Switzerland*. Hitherto I have always reluctantly left the *Jonquils* in the same Genus with the *Tazettas of* LINNÉ, being partly reconciled to this unnatural junction, by one or two Species which have possibly sprang from an adulterous intercourse of both Genera. The vast difference of Foliage, long slender Tube shaped like a Clarinet, and more flattened Crown, in the former, now do away with every scruple of removing them; and their quill-shaped Leaves render a Poetic name peculiarly appropriate to them, which is familiar to every Latin Scholar and will remind him of those halcyon days, when he repeated "*Tityre tu patulæ recubans sub tegmine Fagi.*" *Prasiteles* sends up a naked Peduncle late in autumn before the Leaves; it has from one to four Flowers in a sheath of a sea-green colour, and charming spicy fragrance; Petals narrowly wedge-shaped or in weak Plants linear: Crown not entire at its base, but consisting of 6 distinct lobes with obtuse sinusses; the Leaves are often only 1 or 2 in number, quill-shaped and fistular; this curious Plant was introduced in the time of PARKINSON, and again in 1813 by *Dr.* J. V. THOMPSON, who being told by me that SCHOUSBOE had seen it in the neutral ground between *St. Rocque* and *Gibraltar*, brought several hundred Bulbs here from thence, some of which are still dragging on a wretched existence for want of a moist soil and warmer Climate. *Argenope* I have not been so fortunate as to see living, but from DESFONTAINE's figure its Flowers seem erect, and if so, they differ in that respect from all the rest of the Order; they are white, and the specific name of *Sero-*

tina, adopted by LINNÉ from L'ECLUSE is peculiarly happy; for SCHOUSBOE informs us that like *Prasiteles* it sends up a naked Peduncle, bearing from 1 to as many as 7 Flowers in a sheath, and they expand in succession very slowly for six or eight weeks according to their number, during which time after the autumnal rains fall, its Leaves appear; these are channelled and not so quill-shaped as in *Prasiteles*; its Peduncle is finely striated; Petals white, narrowly lanceolate; Crown orange colour, extremely short, saucer-shaped and crenated.

Ord. 4. PANCRATEÆ.

Pericarpium formâ varium, 1–3-loculare, membranaceum, ab apice 3-valve, aut lateribus ruptum. Petala 6, coalita: Tubus brevis longusve; ore in Coronam staminilegam, variæ formæ et longitudinis, hactenus raro irregularem, desinens: Limbus basi fere crassitie parietis Tubi, fere constanter regularis, 6-partitus; Laciniæ formâ variæ, disco marginibusve nunc coronæ adnatæ: marcescentia præter Tubum quarundum basi ut in Crino vegetum. Filamenta 6, ore tubi 1 serie inserta basibus plus minus attenuatis, coronæ tota adnata vel rarissime infra ejus apicem libera, subulata, nunc deorsum reclinata. Antheræ vacillantes, 2-loculares, 4-valves. Stylus erectus vel deorsum reclinatus, gracilis, filiformis. Stigma capitatum, 3-lobum. Semina 2–21 in singulis loculis; bulbiformia Tunicâ albidâ viridive carnosâ, Albumine parco nullove; vel compressa Tunicâ nigrâ membranaceâ, Albumine copioso; Embryo juxta Hilum nidulans, nunc in pericarpio germinans et ante Plumula prodit in Bulbum tumens; Radicula sub Micropylâ nunc auctu Tunicæ ad latus Hili parum semotâ. *Herbæ per totum fere orbem inter* Tropicos *usque ad lat.* 46 *borealem, præcipue oris et littoribus maris. Bulbus sæpe mole Pugni. Stipulæ nullæ. Folia viridia aut glauca, 2-faria vel multifaria, angusta vel latissima, nunc petiolata, autumno evanida aut toto anno vegeta. Pedunculus axillâ foliorum interiorum, raro præcocior et nudus,* 1–26-*florus, post florescentiam haud raro in terram arcuatus, solidus. Pedicelli nunc deficientes. Bracteæ* 1 *vel* 2 *spathaceæ; præter ramentaceas.*

Sect. 1. Seminum Tunica nigra, membranacea crustaceave.

Gymnoterpe. Corollæ Tubus brevissimus, infundibuliformis: Laciniæ spatulatæ: Corona brevissima lobis 2-dentatis. Filamenta fere longitudine laciniarum. *Herba prope* Seville, 5–7-*pollicaris. Bulbus magnitudine* Avellanæ. *Flores lutei, erecti. Pedunculus ante folia* Octobri, *gracilis, teres,* 2-*florus. Pedicelli graciles, longi. Bractea* 1. *Folia* 2–3, *angusta, semiteretia* Juncorum, *æstate evanida. γυμνος nudus, τερπω delecto. Species* 1. Pancratium Humile CUV. *Ic.* 3. *t.* 207. *f.* 2. *e quâ tantum cognita.*

Almyra. HORT. TR. Corollæ Tubus cylindraceus apice parum dilatato: Laciniæ recurvulo-patentissimæ, lanceolatæ disco intus convexo: Corona brevissima lobis falcato-2-dentatis. Filamenta fere longitudine laciniarum. *Herbæ prope* Rochelle, *et littoribus Maris* Mediterranei, 1–1½-*pedales. Folia glauca, lorata, versus apicem*

latiora, Aprili *prodeuntia fine* Augusti *interitura. Flores nivei, erecti, fragrantes. Pedunculus foliis jam adultis* Junio *exsertus, valde compressus et anceps,* 7–13-*florus, in fructu versus terram curvus. Pedicelli brevissimi.* αλμυρος *salsus, rejecta Æolice aspiratione, cum littora amet. Species* 2. Pancratium Illyricum L. Parviflorum Delil. *in Pl. Liliac. v.* 8. *t.* 471.

Pancratium. J. L. Th. Corollæ Tubus cylindraceus apice parum dilatato: Laciniæ recurvo-patentes, ligulares, disco inferne plus minus coronæ adnatæ: Corona laciniis paulo brevior, infundibuliformis lobis 2-dentatis. Filamenta coronâ paulo longiora aut vix, plus minus inflexa. *Herbæ in littoribus Maris* Mediterranei, *Ins.* Teneriffe, Molucas, Ceylon, Hindostan, 1–1½-*pedales. Bulbus magnitudine Ovi* Anseris Gallinæve. *Folia sæpius glauca, anguste vel late lorata, in maritimo quæ typus et affinibus toto anno vegeta. Flores nivei, erecti, fragrantes. Pedunculus compressus, non anceps,* 1–10-*florus. Pedicelli crassi, breves. Species* 3. P. Maritimum L. Canariense Ker. Verecundum Sol. *An jungendæ* Zeylanicum L. Longiflorum Roxb. et Maximum Forskh. *floribus solitariis abludentes?*

Neæra. Corollæ Tubus infundibuliformis basi contractâ; Laciniæ patentes vel reflexæ, oblongæ: Corona laciniis multo brevior, lobis semiorbiculatis. Filamenta coronâ multo longiora, erecto-patentia. *Herba in* Peru, *collibus arenosis,* 1½-*pedalis. Bulbus oblongus. Flores fulvi, nutantes. Pedunculus ante folia* Decembri, *non anceps,* 3–7-*florus. Pedicelli graciles. Folia glauca, lorata, concaviuscula, æstate evanida. Nomen nymphæ a* Phœbo *adamatæ, cum in calidis delectetur. Species forte plures, typo* Pancratio Croceo Domb. *in Pl. Liliac. No.* 187.

Eustephia. Cav. Corollæ Tubus brevissimus, intus 6 foveis; Laciniæ in cylindrum convergentes, lineares: Corona fere longitudine laciniarum lobis 2-partitis unde Alas filamentorum referunt. Filamenta laciniis parum longiora, erecta. *Herba* 1½-*pedalis, forsan e* Mexico. *Folia lorata, quandoque parum falcata. Flores coccineo-virentes, cernui, in Icone facie* Aloium. *Pedunculus simul cum foliis in Horto* Matritensi Maio 1794, *compressus. Pedicelli graciles. Bracteæ longæ, puniceæ. Species* 1. E. Coccinea Cav. *Ic. v.* 3. *t.* 238. *An sui Ordinis?*

Eucrosia Ker. Corollæ Tubus brevissimus, basi filamentorum Glandulis 6 bulbatus; Laciniæ incurvo-patentes, lanceolatæ, interiores undulatæ: Corona valde obliqua latere superiore breviore lobis profunde 2-fidis Alas filamenta decurrentes referentibus. Filamenta longissima, ima deorsum reclinata. *Herba in* Brasiliâ 11–14-*pollicaris. Folia* 5–7, *multifaria, petiolata: Lamina læte viridis, ovali-lanceolata: autumno evanida. Flores flavo-miniati, nutantes. Pedunculus mox post folia nova* Maio, *vix crassitie Calami* anseris, *compressiusculus, fistulosus,* 4–5-*florus. Pedicelli longi, graciles. Species* 1. E. Bicolor Ker *in Bot. Reg. No.* 207. *An ex Ordine repellendæ omnes quibus Petala mel secernunt?*

Sect. 2. Seminum Tunica albida viridisve, carnosa.

Calostemma R. Br. Corollæ Tubus anguste infundibuliformis: Laciniæ patentes, spatulato-lanceolatæ, marginibus discove basi coronæ

nunc adnatis: corona cyathiformis, laciniis paulo brevior lobis 2-dentatis. Filamenta coronâ parum longiora. Semina 1–2 in eodem loculo, cæteris sæpius vacuis et ad latus coarctatis, sine albumine. *Herbæ in* Novâ Hollandiâ, $1\frac{1}{2}$–2-*pedales. Bulbus globosus. Folia cæsia, anguste lorata* Narcissi. *Flores albidi, atro-purpurei luteive cum* 6 *maculis, erecti, halitu vinoso. Pedunculus ante folia vel dum prodeunt, apud nos* Septembri *et* Octobri, *vix anceps*, 13–27-*florus. Pedicelli graciles, inæquales, tardi ut priorum Semina nunc matura antequam ultimi floruerunt. Species* 3. C. Album, Purpureum R. BR. Luteum SIMS. *fig. melior in Bot. Reg. No.* 421. *Embryones* 2 *in uno Semine* C. Purpurei *inveni.*

Eurycles HORT. TR. Corollæ Tubus tibiæformis, rectus: Laciniæ patentissimæ, spatulato-lanceolatæ: Corona brevissima, patens, lobis 2-dentatis. Filamenta coronâ multo longiora, incurvo-patentia. Semina 2 medio singulorum loculorum, albuminosa. *Herba in Ins.* Java, Sumatra, Amboina *sylvis*, $1\frac{1}{2}$-*pedalis. Folia læte viridia, petiolata ; Lamina ampla, late cordata, lateribus in cunis involutis, nervis parallelis costata, apud nos* Maio *et* Junio *prodeuntia* Decembri et Januario *interitura. Flores nivei, erecti, inodori. Pedunculus* Augusto, Septembri *ubi in natali solo pluviæ cessant, non anceps*, 12–30-*florus. Pedicelli breves.* ευρυς *latus* κλεος *celebris. Species* 1. Pancratium Amboinense L.

Ismene HORT. TR. Corollæ Tubus cylindricus apice parum latiore, curvulus: Laciniæ recurvæ, lineari-lanceolatæ: Corona ampla, calathiformis lobis varie eroso-dentatis. Filamenta coronâ vix longiora et infra ejus apicem sæpe libera. Semina 2–5, ad medium singulorum loculorum sessilia, non albuminosa. *Herbæ in* Peru, 2–$2\frac{1}{2}$-*pedales. Folia* 6–7, *multifaria, basi vaginantia infimo stipulaceo, late lorata, autumno evanida. Flores nivei vel aurei, nutantes, fragrantes. Pedunculus axillâ interiore foliorum novorum, apud nos* Aprili, Maio, *anceps*, 3–6-*florus. Pedicelli breves. Bracteæ grandes. Nomen Poeticum. Species* 3. Narcissus Amancaes R. et P. Pancratium Calathiforme REDOUT. Nutans KER, *fig. in Bot. Mag. No.* 1561.

Hymenocallis HORT. TR. Corollæ Tubus calamiformis, basi in fructu vegetus: Laciniæ recurvæ, ligulares: Corona laciniis multo brevior et substantiâ tenuior, lobis truncatis vel denticulatis. Filamenta longa, incurvo-patentia. Semina 2, basi singulorum loculorum sessilia, erecta, non albuminosa. *Herbæ in* Americâ Æquinoctiali, *ad ripas fluviorum*, $1\frac{1}{2}$–2-*pedales. Folia viridia ; sessilia et lorata ; aut petiolata Laminâ lanceolatâ ; in cunis parallela, toto anno vegeta. Flores nivei, erecti, odore* Balsami Peruviani. *Pedunculus bis in anno circa æquinoctia prodeuns, anceps, in fructu deorsum arcuatus,* 2–20-*florus. Pedicelli breves, vel nulli. Bracteæ mox emarcidæ.* υμην *membrana* καλλος *pulchritudo. Species* 12. H. Erosa MS. *fig. Bot. Mag. No.* 825. Littoralis, Paludosa *fig. in Bot. Mag. No.* 1082. Lacera *fig. in Bot. Mag. No.* 827 (*quæ forte* Pancratium Carolinianum L.). Fragrans *fig. in Bot. Mag. No.* 1467. Speciosa, Tubiflora *fig. in. Bot. Reg. No.* 265. HORT. TR. Pancratium Mexicanum L. Augustum KER. Caribæum L. *fig. in Bot. Mag. No.* 826. Ovatum KER. Undulatum KUNT. *præter alias ineditas.*

In the preface to LINNÉ's Prælectiones, *Professor* GISEKE says that immortal Botanist never gave more than two courses of his Collegia privatissima, as they were called at *Upsal*. This however is a mistake, for DRYANDER informed me that he had attended another, along with the son of a *Swedish* nobleman, who paid for it very handsomely; and when we read Philosophia Botanica together at *Chapel Allerton*, he communicated several remarks of LINNÉ's not mentioned by GISEKE. Among others, LINNÉ told them, that when he first saw *Pancratium Caribæum* and *Crinum Americanum* blossoming together in CLIFFORTS Hothouse, he had doubts about the propriety of separating them generically, as he could find no difference whatever, except the thin film connecting the filaments of the former; and though at last he not only divided, but placed several other Genera between them in Hortus Cliffortianus, he owned this was for artificial purposes, and that their strong natural affinity forced him to take the first opportunity of bringing them together. Accordingly in the 1st and 2nd editions of Species Plantarum, various editions of Genera Plantarum and Systema Vegetabilium, he inserts *Crinum* next to *Pancratium*; had he lived now, to become acquainted with the remarkable conformity of their Pericarpia not splitting into regular valves, crowned by the persistent Tube of their floral Envelope, as well as their singular bulbiform Seeds, and with the wide range which the coronary membrane takes through the whole Tribe of *Liriogamæ* it would no doubt have confirmed his first opinion, and I think there cannot be a question of their being the proximate links of their respective Orders. The greater part of *Pancrateæ* are confined to warm countries between or near the *Tropics*, but one grows as far north as *lat.* 46, near *Rochelle*, and 3 Species have been discovered in the *Southern* Hemisphere about the latitude of *Port Jackson*; but no intertropical Species has yet come to my knowledge from the western coast of *Africa*. I divide *Pancrateæ* into two Sections from the structure of their Seeds, which in the 1st are albuminous with a black membranaceous or crustaceous Coat, but it is pretty thick in some Species, and the Albumen of those few I have examined, corresponded with that of *Eurycles*, in not entirely covering the Embryo, which makes the transition from one Section to the other less abrupt. *Gymnoterpe*, the first Genus in my series, rests solely on the authority of CAVANILLES, who says that it grows wild "*in Hispali ditione*" and has narrow rush-like Leaves, coming up after the Flowers, which are yellow; *Sir* J. E. SMITH in REES' Encyclopædia, and *Mr*. J. B. KER in his Review of *Pancratium*, both regard it as a doubtful species of this Order, the former thinking it may belong to *Narcisseæ*; but if so, CAVANILLES has blundered egregiously, and its very long Stamina render this improbable; whether it belongs to *Narcisseæ* or *Pancrateæ* however, it must always remain the intermediate Genus between them. *Almyra* has glaucous lorate Leaves, pushing up all at once about *April*, and decaying as suddenly in the heats of *August*; its Crown is very short, spreading into a Star of 12 falcated teeth, and the orifice of its Tube nearly closed by the Filaments thickened above their insertion; this is a very hardy Genus, thriving in almost

any soil; and the Plant which L'ECLUSE says was discovered by JOHN VAN OPHEM on the high mountains of *Sardinia* at a distance from the sea, may perhaps be *Parviflora* of the Plantes Liliacées. Under *Pancratium* I only leave those Species agreeing with *Maritimum* L. the Plant no doubt of DIOSCORIDES, and still called *αγρια σκιλλα* by the *Greeks*. He describes its Bulb as possessing similar virtues to the true *Squill*, but milder; and L'ECLUSE when visiting RONDELETIUS at *Montpelier*, found the Apothecaries there using one for the other, in the composition of Theriaca. Six Species are here referred to it, of which *Maximum* FORSKH. ought perhaps to be detached; but I cannot think that the specimen described and figured in the Journal of Science, *v.* 2. *p.* 319. *t.* 3. *f.* 1. for *Carolinianum* L. is different to *Maritimum* L. *Mr.* J. B. KER observes respecting it, "*manu certissima Dryandri subsignatum titulo Pancratii Caroliniani*"; that cautious Botanist nevertheless was afterwards convinced of its being *Maritimum* L. and has not inserted *Carolinianum* in the 2nd edition of Hortus Kewensis. If the figure in the Journal of Science were correct in representing the Filaments detached from the Crown, such a character would indeed be very decisive; but unfortunately they adhere to the very top of the interstices in the specimen, nor can I find the smallest difference in its glaucous Leaves, and those of Bulbs which I brought from *Cette* in *Languedoc*, where it grows deep in Seasand, among *Coris Monspeliensis*. I remain firmly persuaded, that CATESBY's Plant is either *Littorale β. Bot. Mag. No.* 825, if that be indigenous in *South Carolina*, which rests solely on the authority of *Mr.* WILLIAM SALISBURY; or *Rotatum β. Bot. Mag. No.* 827. CATESBY's figure certainly resembles *Maritimum* L. so much, that I did join them in the 2nd volume of the Linnean Transactions; and notwithstanding he says in his preface, "*in designing the Plants I always did them while fresh and just gathered,*" and afterwards in his description, "*the Leaves are of a deep shining green, like those of Lilio-narcissus flore luteo Autumnalis minor,*" this figure may have been an exception to the rest, and made here from *Maritimum* L. as *Mr.* J. B. KER first conjectured in the Botanical Magazine; if on the contrary it was made either from *Littorale β*, or from *Rotatum β*, it proves CATESBY to have been a wretched draughtsman, and many of his other figures are equally incorrect. Bulbs of *Rotatum β* were gathered in a bog about 50 miles above *Savannah*, by my faithful servant ROBERT BAGSHAW; but the number of its Flowers hardly corresponds with those of CATESBY's Plant, which having been discovered, as he mentions, near a deserted town of the *Aborigines* called *Palachucala*, remains to be identified by the Botanists of that country. *Neæra* blossomed while I was at *Paris* in 1786; it had then no Leaves, and to the best of my recollection dull orange-coloured Flowers, not scarlet; but I made no memorandum, and now propose it from the figure in Plantes Liliacées. Of *Eustephia* likewise nothing is known yet in *Europe*, except what CAVANILLES relates. *Eucrosia* is yet in very few collections about *London*, and differs so widely from the other Genera in its irregular Flowers, that I place it here doubtfully. In the 2nd

Section of *Pancrateæ* the Seeds are bulbiform, with a whitish fleshy coat changing to green when exposed to the air and light, as well as generally without Albumen. *Calostemma* is a *New Holland* Genus with a thin membranaceous Pericarpium, unquestionably not a Bacca, as *Mr.* R. BROWN describes it; nor is it regularly 1-locular even when young, like that of *Brunswigia*, but by the abortion of one or two of its cells, their dissepiments being pressed to the side; and in his character of its Crown "*dentibus alternis staminiferis*" he makes a double blunder, for 1st in a physiological sense, the Filaments of all *Pancrateæ* are opposed to the Petals and consequently to the interstices or sinusses of the Crown, not to the lobes, though when the lobes are emarginated or run up the Filaments, the interstices are the highest; this is very evident in *Calostemma* but more especially in *Ismene*, where the Filaments are often detached a little below the interstices: 2ndly the Crown of both Species already introduced projects into two teeth, not one, between each Filament: in this Genus, as in some *Amaryllideæ* when no more than one Seed is fœcundated in the whole Pericarpium, it occasionally contains two Embryos. *Eurycles* has rather a different Habit to the rest: its Leaves are of a yellow green, petiolated, broadly heart-shaped with parallel ribs, rolled in at their sides before they unfold, like those of *Niobe*, and in our Stoves they continue to decay through *December* to *February* sooner or later according to the temperature of the Stove, fresh ones not succeeding till *May* or *June*: the Peduncle pushes up in *August* or *September*, which in its own country is the end of the rainy Season; the Crown is very short, and deeply cloven between the Filaments, according to *Mr.* R. BROWN in his Prodromus "*intus usque ad basin*," though I have never found it so; and what he means by "*habitu Calostemmate accedit*" to say nothing of his Latin, I cannot guess, for no Plants of this Order are more discordant either in Leaves or Flowers; its Seeds germinate in the Pericarpium, a very common occurrence in *Spathaceæ*, when that Organ does not split into valves especially in a moist atmosphere, or if the Peduncle either by a natural bend, or the weight of its Fruits, touches the earth; its Embryo is partly immersed in a Cap of yellowish fleshy Albumen, and the Bulb swells to a large size, before the first Leaf appears, see *Tab.* *fig.* . *Ismene* is a noble Genus, and as it will produce Seeds here, if the Stigma be fœcundated when fully developed, and the Honey carefully drawn off from the Tube, I hope to see it more common: the Leaves are sheathing, and the lowest rather a Stipule; Flowers white or gold colour, more or less nodding, fragrant; Crown large, boat-shaped and jagged; Filaments hardly longer than the Crown and often detached from it a little below the top, so that RUIZ and PAVON have referred one Species of it to *Narcissus*. *Hymenocallis* is so named from the fine delicate Membrane which connects its Filaments. Many Species have lately been introduced from different parts of *South America*, the Leaves of which are constantly vegetating, and as the greater part of them if not all produce one or two Bundles of delightfully fragrant Flowers twice a year, a little before or after the *Equinoxes*, they are most desirable

Plants in every Stove, more especially as they succeed under the shade of taller Plants. Two species of this Genus, which I attempted to distinguish in the 2nd volume of Linnean Transactions, have been erroneously quoted by *Mr.* J. B. KER, namely *Amœnum* and *Fragrans*; the former of these, which he takes for the latter, is figured in the Botanical Magazine No. 826; it has sessile lanceolate Leaves, Flowers without even a rudiment of any Pedicel, Tube of Corolla thickly striated, Segments of the Limb equally concave, with one or two teeth in its Crown between each Filament; and being certainly SLOANE's Plant, I now wish to restore to it LINNÉ's name of *Caribæa*; the other Species *Fragrans*, figured in the Botanical Magazine *No.* 1467, has petiolated Leaves but narrower than in *Speciosa*, Flowers with exceedingly short Pedicels, Tube of Corolla only 6-sulcated, its alternate Petals much more concave, and its Crown often 1–2-toothed between each Filament, but not always, being sometimes emarginated without any tooth. *Hymenocallis Tubiflora* of the Horticultural Transactions grows wild in *Guiana*, from whence it was brought in a *French* vessel captured in the late war, and purchased by his late Majesty. *Mr.* J. B. KER in the Journal of Science also confounded this species with *Undulatum* of KUNTH, but he now owns it to be distinct, and has published a figure of it in the Botanical Register, *No.* 265, a work which notwithstanding the death of SYDENHAM EDWARDS, still maintains a decided superiority in every respect, over the Botanical Magazine; the Leaves of this Species are so much attenuated at the top as to be almost cuspidated, its Crown very short and entire without teeth. By a manuscript note of *Dr.* RICHARDSON's in his copy of TREW's *Plantæ Selectæ*, it appears that *Hymenocallis Littoralis* was cultivated by his father, the celebrated Botanist at *North Bierly* in *Yorkshire*, so long ago as 1742; and that THOMAS HODGSON who had worked as a labourer in his garden, but was pressed for a sailor, and sent home wounded from the siege of *Carthagena*, brought back Bulbs with him; it grows wild there in the sandy shores, and if indulged with a large pot and a little salt water in our Stoves, produces a truly magnificent bunch of Flowers.

Ord. 5. AMARYLLIDEÆ.

Pericarpium figurâ varium, 1–3-loculare, membranaceum, ab apice 3-valve, aut tantum lateribus ruptum. Petala 6, varie coalita, nunc tantum disco basis, unde Tubus modioliformis, infundibuliformis calamiformisve, ore rarissime in sertum producto; dein in Limbum basi crassitie parietis tubi, regularem vel irregularem, disjuncta; marcescentia præter quorundam Tubum in fructu altius demissiusve vegetum. Filamenta 6, ore tubi 1 vel 2 seriebus proximis inserta, basi nunquam attenuata, rarius decurrentia, regularia vel irregularia, subulata. Antheræ vacillantes, 2-loculares, 4-valves. Stylus erectus vel reclinatus, filiformis vel supra basin crassior. Stigma plus minus 3-fidum. Semina 1–20 in singulis loculis, 2-plici serie septis sessilia, magnitudine *Pisi Castaneæve*, bulbiformia; Tunica albida viridisve, e carne firma post germinationem non mutatâ; Albumen nullum; Embryo plus minus curvus et clavatus, juxta Hilum nidulans; Radicula

Hilo versa sub Micropylâ, sed cum hæc auctu Tunicæ sæpe remotior et inconspicua fit, latus tunc perforare videtur. *Herbæ a Promontorio Bonæ Spei, inter* Tropicos *totius Orbis, usque in Ins.* Nipon ½–6-*pedales. Bulbus mole et formâ varius. Stipulæ nullæ. Folia* 2-*faria vel multifaria, angustissima vel latissima, integerrima crenulata fimbriatave, hactenus non pubescentia, per æstatem evanida, aut constanter vegeta. Flores omnium colorum, si excipias cæruleum. Pedunculus ad latus axillâve foliorum, nunc præcocior, gracilis vel crassus, erectus,* 1–100-*florus, solidus vel in paucis dum tabescit fistulosus. Pedicelli longitudine varii, aut deficientes. Bracteæ* 2, *spathaceæ, mox emarcidæ ; præter ramentaceas.*

Sect. 1. Folia per totum annum vegeta.

Crinum, L. Dryand. Pericarpium lateribus ruptum. Petala in Tubum longissimum rectum, calamiformem, in fructu altius demissiusve vegetum coalita ; dein recurva, ligularia, regularia, interiora sæpe vix latiora. Filamenta 1 serie, basi plus minus nodosa, nunc parum deorsum secunda. Stylus parum deorsum reclinatus. Stigma 3-lobum. Semina 1–13 in singulis loculis. *Herbæ inter Tropicos* Americæ, Asiæ, et Novæ Hollandiæ, *humidis*, 1½–6-*pedales. Bulbus porraceus, nunc crassitie femoris. Folia* 7-25, *viridia, lingulata, integerrima vel crenulata, sæpe concava. Flores albi cum rubore vel fere toti rubri, erecti, fragrantes. Pedunculus axillâ foliorum exteriorum, bis in anno circa æquinoctia, crassus, compressus, non anceps,* 4-60-*florus. Pedicelli breves, aut nulli. Species* 13. C. Pumilum MS. *Hort. Schonb. t.* 202. Soboliferum MS. Commel. *Pl. Rar. t.* 15. Americanum L. *fig. in Commerc. Litt. Novemb.* 1744. *p.* 321. Erubescens L. fil. Cruentum Hort. Angustifolium, Venosum, Pedunculatum R. Br. Toxicarium, Asiaticum, Canaliculatum, Brevifolium Roxb. Amabile Ker.

Tænais. Pericarpium lateribus ruptum. Petala in Tubum longissimum, curvatum, calamiformem, in fructu altius demissiusve vegetum coalita, dein patenti-recurva inferioribus plus minus ventricosis, lineari-lanceolata vel lanceolata, interiora latiora. Filamenta 1 serie, non decurrentia, limbo breviora, plus minus fasciata, cum Stylo deorsum reclinata. Stigma et Semina *Crini. Herbæ inter Tropicos* Africæ, Asiæ et Novæ Hollandiæ, 1½-3-*pedales. Bulbus ovatus. Folia* 7–13, *viridia aut raro cæsia, sæpius multifaria et lineari-lanceolata, nunc undulata, crenulata. Flores albi, haud raro Vittis* 6 *rubris unde nomen, parum nutantes, in quibusdam fragrantes. Pedunculus axillâ foliorum exteriorum, non anceps,* 1-15-*florus. Pedicelli nunc deficientes. Species* 7. T. Mucronigera MS. *Bot. Mag. No.* 1171. Amaryllis Zeylanica L. Australasiæ Ker. Ampla MS. *Bot. Mag. No.* 923. Ornata L. fil. Crinum Yuccæflorum P. L. T. Caricifolia MS. *Bot. Mag. No.* 1253.

Erigone. Pericarpium lateribus ruptum. Petala in Tubum nunc longissimum, curvulum, plus minus calamiformem coalita, marginibus exteriorum inferius liberis ; dein recurva præcipue superiora, lanceolata, interiora latiora. Filamenta 2 proximis seriebus, parum decurrentia, vix longitudine limbi, plus minus fasciata, cum Stylo deorsum

reclinata. Stigma et Semina *Crini. Herbæ in Promontorio* Bonæ Spei *humidis,* 2½–4-*pedales. Bulbus ovatus. Folia sæpius glauca, multifaria, in terram flaccida, lorato-attenuata, crenulata. Flores carnei, dum fatiscunt saturatius rubentes, instar* Martagonum *fœtidi vel suaveolentes. Pedunculus ex axillâ foliorum exteriorum ante solstitium æstivum non anceps,* 9–21-*florus. Pedicelli crassi, sæpius breves.* ερι *valde* γονος *fertilis. Species* 6. Crinum Govenicum HERB. *in Hort. Tr. v.* 3. *p.* 190. *t.* 6. Amaryllis Longiflora KER. Viridifolia BURCH. Riparia KIT. *Bot. Mag. No.* 1178. Revoluta KER. Longifolia L.

Sect. 2. Folia per æstatem evanida.

Palinetes. Pericarpium vix lobatum Septis crassis, lateribus ruptum. Petala in Tubum longiusculum, parum sursum curvum, tibiæformem coalita; dein recurva præcipue superiora, lineari- vel spathulato-lanceolata, interiora parum latiora. Filamenta 2 proximis seriebus, vix longitudine limbi, versus latus inferius plus minus secunda, incurvo-patentia. Stylus parum reclinatus. Stigma capitatum 3-lobum. Semina 7–11 in singulis loculis. *Herbæ in* Corana, *prope* Great Visch Rivier, *arenosis,* 1–1½-*pedales. Bulbus parum supra terram, æstate in solo natali magnitudine* Capitis. *Flores carnei, erecti, odore fere* Daphnis *fragrantes. Pedunculus ante folia æstate vel autumno, in alterâ anceps, circiter* 1 *pedem longus,* 30–60-*florus. Pedicelli graciles vel crassi, teretes vel angulati, in imâ demum longissimi. Folia* 7–11, *glauca, humifusa, falcato-lorata, crenulata, obtusa, initio æstatis usque ad bulbum marcescentia; horum interiora dein autumno iterum pullulantia cum novis apice non sphacelato eundem casum subituris.* παλιν *rursus* ετος *annus. Species* 2. Crinum Falcatum JACQ. Amaryllis Coranica BURCH.

Boophone. Pericarpium obpyramidale, argute 3-lobum, ab apice dehiscens. Petala in Tubum longiusculum, sursum curvulum, tibiæformem coalita; dein recurva, lineari-lanceolata, vix irregularia, interiora parum latiora. Filamenta 2 proximis seriebus, limbo longiora, incurvo-patentissima, vix secunda. Stylus parum reclinatus. Stigma 3-lobum. Semen 1 medio singulorum loculorum. *Herba in* Roggeveldt *campis excelsis,* 1½-*pedalis. Bulbus porraceus, crassitie Brachii. Flores cæruli, erecti, fragrantes. Pedunculus ante folia autumno, valde compressus, anceps,* 60–100-*florus. Pedicelli longi. Bracteæ* 2 *exteriores latissimæ. Folia* 7–10, *glauca, bifurca, lineari-lanceolata, integerrima.* βους *bos* φονευω *occido. Species* 1. Amaryllis Disticha L. *et ni fallor alia foliis angustioribus non undulatis.*

Crossyne. Pericarpium obpyramidale, 3-lobum, ab apice dehiscens. Petala in Tubum brevissimum obpyramidalem coalita, marginibus exteriorum usque ad basin liberis; dein recurvo-patentissima, vix irregularia, lineari-lanceolata, interiora parum latiora. Filamenta 1 serie, circiter longitudine limbi, vix secunda, incurvo-patentissima. Stylus parum reclinatus. Stigma 3-lobum. Semina 3–5 medio singulorum loculorum. *Herba in* Hantum, 1½-*pedalis. Bulbus porraceus, crassitie* Brachii. *Flores carnei, erecti, fragrantes. Pe-*

dunculus ante folia autumno, valde compressus, anceps, 80–100-*florus. Pedicelli longissimi. Bracteæ* 2 *exteriores latissimæ. Folia* 4–6, *viridia, bifaria, horizontalia, lingulata, membranâ fuscâ fimbriatâ marginata. κροσσος fimbria ους vomer, a figura ciliorum. Species* 1. Amaryllis Ciliaris L. *Suppl.*

Amaryllis, J. L. Pericarpium ovale, parum 3-lobum, ab apice dehiscens. Petala in Tubum brevissimum obpyramidalem coalita, marginibus exteriorum usque ad basin liberis; dein in infundibulum latere superiore magis recurvum divergentia, cuneato-lanceolata, interiora latiora. Filamenta 1 serie, parum decurrentia, petalis breviora, fasciata, cum stylo deorsum reclinata. Stigma 3-lobum. Semina 7–11 in singulis loculis. *Herba in Promontorio* Bonæ Spei, $1\frac{1}{2}$–$2\frac{1}{2}$-*pedales. Bulbus magnitudine* Pugni. *Flores carnei, dum fatiscunt intensius rosei, parum nutantes, halitu vinoso. Pedunculus autumno nudus, compressus, parum anceps,* 7–18-*florus. Pedicelli crassi,* 1–$2\frac{1}{2}$-*pollicares. Folia* 7–9, *diu post flores exeuntia, viridia margine tenello sæpe rubro, basi bifaria, lorata, glabra. Species* 2. A. Belladonna L. *quæ typus in Hort. Cliff.* Blanda KER.

Brunswigia, HEIST. Pericarpium oblongum, medio 1-loculare, plus minus argute lobatum, ab apice dehiscens. Petala in Tubum brevissimum obpyramidatum coalita, marginibus exteriorum usque ad basin liberis; dein parum divergentia et deorsum arcuata apicibus præcipue superiorum undique revolutis, lineari-lanceolata, interiora angustiora. Filamenta 1 serie, decurrentia, petalis paulo breviora, fasciata, cum stylo deorsum arcuata. Stigma 3-lobum. Semina 9–21 in singulis loculis. *Herbæ in* Hantum, 2–3-*pedales. Bulbus subrotundus, vel porraceus. Flores fulvo-coccinei, parum nutantes, inodori. Pedunculus ante folia autumno, compressus, vix anceps,* 26–40-*florus. Pedicelli crassi, longissimi. Folia* 4–6, *viridia, lingulata, margine rubro exquisitissime ciliata; aut* 9–11, *glauca, lorato-spatulata et integerrima. Species* 3. Amaryllis Grandiflora MS. *Bot. Reg. No.* 192. Glauca MS. REDOUT. *Pl. Liliac. No.* 370. Orientalis L.

Loxanthes. Pericarpium subrotundum, 3-lobum, ab apice dehiscens. Petala in Tubum brevissimum modioliformem coalita marginibus infra os parum liberis; dein sursum secunda infimo sæpe deflexo, apice plus minus recurva, lineari-lanceolata, nunc undulata, latitudine vix inæqualia. Filamenta 1 serie, basi plus minus confluentia, longitudine petalorum vel ultra, fasciata, cum stylo deorsum reclinata. Stigma 3-fidum. Semina 5–9 in singulis loculis. *Herbæ in Promontorio* Bonæ Spei, 9–18-*pollicares. Bulbus magnitudine Ovi* Columbæ *vel* Anseris. *Flores carnei roseive, parum nutantes, inodori. Pedunculus mox ante folia vel cum novis autumno, gracilis vel crassus, teres vel compressus, nunc viscosus,* 7–19-*florus. Pedicelli sæpe longissimi. Folia viridia, basi* 2-*faria, lorata vel lingulata, in unâ falcata, in aliis pustulata. λοξος obliquus ανθος flos. Species* 7. Amaryllis Pendula, Marginata, Striata, JACQ. Laticoma KER *in Bot. Reg. No.* 497. Flexuosa, Humilis JACQ. Undulata L.

Orexis. Pericarpium maturum ignotum. Petala in Tubum brevissimum turbinatum, pone filamenta margine repando annulatum,

coalita, dein sursum secunda infimo sæpe deflexo, apice revoluta, ligularia, undulata, latitudine æqualia. Filamenta 1 serie, petalis multo longiora, divergentia sed cum stylo deorsum reclinata. Stigma 3-fidum. Semina 3–5 in singulis loculis. *Herba prope* Macao, 10–14-*pollicaris. Bulbus magnitudine Ovi* Columbæ. *Flores pulchre lateritii, parum nutantes, inodori. Pedunculus mox ante folia autumno gracilis teretiusculus, vix anceps,* 7–11-*florus. Pedicelli graciles, breves. Folia* 5–6, *glauca, anguste lorata* Galanthi, *fine æstatis apud nos tabescentia.* ορεγω *porrigo. Species* 1. Amaryllis Radiata L. FIL.

Lycoris, HERB. Pericarpium maturum ignotum. Petala in Tubum brevissimum obpyramidatum, pone filamenta 6-squamigerum, coalita; dein parum divergentia, deorsum arcuata apicibus undique recurvis, lineari-lanceolata, undulata, interiora vix angustiora. Filamenta 1 serie, petalis longiora, fasciata, cum stylo deorsum arcuata. Stigma 3-fidum. Semina 3–5 in singulis loculis. *Herba prope* Macao, 12–18-*pollicaris. Bulbus magnitudine Ovi* Gallinæ. *Flores aurei, parum nutantes, inodori. Pedunculus mox ante folia autumno, compressus, nonnihil anceps,* 7–10-*florus. Pedicelli crassi brevissimique. Folia* 5–7, *glauca, bifaria, lorata apice summo angustato, serius æstate evanida quam affinium. Species* 1. Amaryllis Aurea, L. FIL. HERB. *in Bot. Mag. No.* 2113.

Imhofia, HEIST. Galatea, *dein* Nerine HERB. Pericarpium subrotundum, 3-lobum, ab apice dehiscens. Petala in Tubum brevissimum modioliformem coalita marginibus infra os liberis; dein patenti-revoluta, regularia, lineari-lanceolata, sæpe undulata, latitudine vix inæqualia. Filamenta 1 serie, basi confluentia, petalis longiora, fasciata, cum stylo erecta vel subreclinata. Stigma 3-fidum. Semina 5–9 in singulis loculis. *Herbæ in Promontorio* Bonæ Spei, *inde procul in* Ins. Nipon, 9–14-*pollicares. Bulbus magnitudine Ovi* Gallinæ. *Flores albi punicei miniative, erecti, inodori. Pedunculus mox ante folia autumno, crassiusculus, compressus, vix anceps, demum sæpe parum fistulosus,* 7–13-*florus. Pedicelli graciles,* ½–1 *pollicem longi. Folia* 4–6, *nunc glauca, lorata. Cl. ab* IMHOF, *bulbum* Brunswigiæ *aliosque in Hortum* Helmstadiensem *introduxit anno* 1748. *Species* 6. Amaryllis Glauca MS. *Bot. Mag. No.* 725. *aliaque inedita apud* GRIFFIN *petalis albis.* Sarniensis L. Rosea HERB. Venusta KER, Corusca KER.

Periphanes. Pericarpium globosum, ab apice dehiscens. Petala in Tubum brevissimum modioliformem coalita marginibus infra os liberis; dein patentia, regularia, lanceolata, nunc undulata, interiora parum latiora. Filamenta 1 serie, basi nonnihil confluentia, petalis breviora, erecto-recurva, regularia. Stylus erectus, filamentis demissior. Stigma 3-partitum, laciniis longis revolutis. Semina 2–4 in singulis loculis. *Herbæ in Promontorio* Bonæ Spei, 5–7-*pollicares. Bulbus magnitudine* Avellanæ. *Flores saturate carnei, erecti, inodori. Pedunculus ante folia autumno, gracilis, teres, glaber,* 7–12-*florus. Pedicelli longi, æquales. Folia* 2–3, *viridia, angusta, linearia, glabra.* περι *circum* φαινω *appareo. Species* 2. Amaryllis Crispa, Stellaris JACQ.

Carpolyza P. L. Pericarpium subrotundum, 3-lobum, ab apice dehiscens. Petala in Tubum brevem infundibuliformem coalita, marginibus infra non liberis; inde recurvo-patentia, regularia, lanceolata, latitudine vix inæqualia. Filamenta 2 seriebus, decurrentia, petalis breviora, erecto-patentia, regularia. Stylus erectus, filamentis demissior. Stigma 3-partitum, laciniis emarginulatis. Semina 4–6 in singulis loculis, diu adhærentia. *Herba in Promontorio* Bonæ Spei, 5–6-*pollicaris. Bulbus parvus. Folia* 3–5, *viridia, angustissima, basi bifaria, linearia, glabra. Flores carnei, erecti, inodori. Pedunculus cum foliis novis sero autumno, gracilis, basi spiralis, teres, lucidus,* 3–5-*florus. Pedicelli longi, tarde exeuntes. Species* 1. Hæmanthus spiralis L. FIL. *in* AIT. *Hort. Kew.* 1. p. 405.

There is so little conformity at present in several Genera to which more species have been added since the death of LINNÉ, that they put one in mind of the verses at the beginning of HORACE's Poem de *Arte Poetica*, which by substituting Vegetables for Animals may be parodied as follows.

> *Hæmanthi* bulbo, caulem si pictor *Ericæ*
> Jungere nunc velit et varias inducere frondes
> Undique collatis ramis, ut turpiter *Ari*
> Desinat in caudam *Crini* formosa corolla
> Spectatum admissi, risum teneatis amici?

Amaryllis for instance in WILLDENOW's work forms a Groupe not much less absurd for a single Genus, than the Vegetable Monster above imagined. Plants belonging to two other Classes are not only there confounded, but among those referable to *Spathaceæ*, we find indiscriminately jumbled together Bulbs like a Nut or the decayed stump of a Post; Leaves constantly growing or disappearing for half the year; Peduncles slender and hollow as a Straw, or having the thickness and solidity of a Footman's Cane; Flowers smelling nauseously, or exhaling the perfumes of *Arabia*; Petals quite symmetrical or irregular as possible: Seeds black and winged or whitish lumps resembling young Potatoes. The Order of *Amaryllideæ*, as I limit it, till our days was confined to *Amaryllis* and *Crinum*, LINNÉ from an unworthy pique, refusing to acknowledge *Brunswigia* of HEISTER; but in 1789 by DRYANDER's persuasion *Sir* JOSEPH BANKS permitted *Cystanthus* of the younger LINNÉ to be detached from *Crinum* in the 1st edition of Hortus Kewensis. Several years elapsed, when *Sternbergia* of KITAIBEL being established on the Continent, it made the Botanists frequenting the *Banksian* School look about them; and at last *Mr.* J. B. KER adopted *Brunswigia* in the Botanical Magazine for *February* 1812, at the same time inconsistently joining to its very irregular Flowers those of *Crinum Falcatum* JACQ. Two years before this, *Mr.* R. BROWN in his Prodromus, had called a larger parcel *Amaryllideæ*, excluding nevertheless as I do, every Species the Seeds of which have a black crustaceous coat: but he adds that they are "*albuminosa*" and what is still more paradoxical, that they have a "*Perianthium regulare*"; for the floral Envelope is irregular both in LINNÉ's type of *Amaryllis*, and every

Species that great man joined to it, except *Sternbergia*, which is excluded by its black crustaceous Seeds to say nothing of its Stipulation. A full detail of *Amaryllis* and *Crinum* has since appeared in the Journal of Science by *Mr.* J. B. KER; and still more lately in the Botanical Magazines for *Dec.* 1819 and *Jan.* 1820 the *Hon.* WILLIAM HERBERT, Rector of *Spofforth* in *Yorkshire* has removed three Genera from *Amaryllis*, and published what he conceives to be their essential characters, to all which separating them however for very different reasons, I had given names in a Paper on their cultivation, which was read at a Meeting of the Horticultural Society in *March* 1812. With our present knowledge of these splendid Vegetables, I think that they may be divided into two perfectly Natural Orders from the remarkable difference in their Seeds, joined to the tendency of their Corolla to adhere to the Fruit or finally fall off from it; leaving the various forms of their Corolla, different insertion of Filaments, structure of Stigma, peculiarities in their Bulb, and even Leaves, to found the Genera. By this separation, which after repeated attempts to avoid, Nature herself if I may so express myself without presumption, has as often imperiously commanded, about half of the Species hitherto joined to *Amaryllis* of LINNÉ will be removed to a separate Order which I call *Zephyrantheæ*, with *Strumareæ* and *Hæmantheæ* intervening. *Amaryllideæ* differ from all other *Spathaceæ*, 1st in the Tube and Limb of the Corolla being nearly of an equal thickness at their junction; 2ndly in the base of the Filaments never being attenuated, but often dilated or knobbed there; 3rdly in the Corolla remaining either fresh and undecayed at its base, or entirely withered, upon the Pericarpium, till that is ripe; 4thly and what I deem most essential, in their bulbiform fleshy Seeds, hitherto accompanied with a solid Peduncle; so that when we cannot obtain the former, a tolerably good conjecture of their nature may be formed by the latter. These bulbiform Seeds are often whitish or tinged with pink till exposed to the air, when they gradually assume a green hue, sometimes so dark as to be nearly black, but howsoever dark they may be always known by their thick fleshy coat hitherto in *Amaryllideæ* devoid of Albumen; if only a few in each cell, they are generally large and irregularly shaped, not unlike small Potatoes. In the 923rd number of the Botanical Magazine, *Mr.* J. B. KER remarks that these "*Massæ carnosæ*" are not constantly to be met with in the Species which produce them, saying "*est iste mos plerisque plane adventitius*;" again in the 1178th number of that work, he asks if they may not be "*probably as some others of the Genus an accidental and alternate mode of Fructification*;" and even so lately as in the 2nd volume of the Journal of Science, he defines the 7th Section of *Amaryllis* "*Bulbisperma constanter? vix?*" After a great many enquiries of our nurserymen and gardeners, joined to my own observation during 40 years, I do not hesitate to reply, that all those species which have these bulbiform Seeds, never produce any other sort; neither are they peculiar to *Amaryllideæ*, but occur in the preceding as well as following Orders of *Pancrateæ* and *Strumareæ*; here however they begin and terminate for aught I know to the contrary, nor have I yet

seen them in *Cepææ*. With respect to their structure, many which I first dissected in 1790 at different periods of their growth from the distinct vessels near their margin left no doubt in my mind, that the great Mass consisted of a thick fleshy coat; and though these vessels had escaped one of our most learned Carpologists, *Mr.* R. BROWN, when he published his Prodromus in 1810, he now owns in the 12th volume of Linnean Transactions that he has found them. His words in the former work are, "*Semina bulbiformia Crini, Amaryllidis, Calostemmatis, constant substantiâ organicâ carnosâ, ad ambitum sæpe virescenti, e texturâ cellulosâ absque vasis spiralibus conflatâ, et utpote organicâ atque intussusceptione crescenti vix Albumen denominandâ.*" In the latter work, after to my amazement giving me credit for an observation which I never made "*that in some species the Seed separates from the Plant, and even from the Pericarpium before the embryo becomes visible,*" he adds "*I have in another place, Prodr. Fl. Nov. Holl. p. 297, speaking of this substance, which constitutes the mass of the Seed, and in a central cavity of which the future Embryo is formed, stated it to be destitute of vessels, and entirely composed of cellular texture; but on a more careful inspection of those Seeds at least in which the separation precedes the visible formation of the Embryo, I now find very distinct spiral vessels; these enter at the umbilicus, ramify in a regular manner in the substance of the fleshy Mass, and appear to have a certain relation to the central cavity where the Embryo is afterwards formed, and which filled with a glairy fluid is distinctly visible before the separation of the Seed. It is a curious consequence of this tardy evolution of the Embryo, which in some cases does not become visible unless the Seed be placed in a situation favourable to germination, that very different directions may be given to its radicular extremity, according to circumstances which we have it in our power to regulate.*" Of all this wonderful statement, no part appears to me correct, except that spiral Vessels enter at the Hilum; but they are chiefly distributed along the margin of the fleshy Mass, the cavity in which is somewhat unilateral, not central as *Mr.* R. BROWN imagines; and till he moves "*Birnam Wood to Dunsinane*" he will never persuade me that we can give "*very different directions to the radicular extremity of the Embryo.*" Many observations, lately repeated out of deference to his authority, convince me that these bulbiform Seeds, so far from being detached before their Embryo becomes visible, adhere to the dissepiments of the Pericarpium till it is not only formed, but very often sprouts. In *Palinetes* this is especially the case; and in the 63rd number of Paradisus Londinensis published *March* 1807, I have said under *Carpolyza* "*Semina diu adhærentia,*" they having continued upon the dissepiments in my Plant, perhaps owing to the coldness of our climate from *December* to *March*. Any which fall off without an Embryo, so far from acquiring one subsequently, soon decay; and the only fact which I communicated to *Mr.* R. BROWN respecting these bulbiform Seeds was, that if we fecundate the Stigma at a proper period, they would often ripen, like the black crustaceous ones of *Zephyranthææ* mentioned by GÆRTNER, though their Peduncle was cut off from the bulb when in blossom. The radicular

extremity of their Embryo I do not hesitate to say is invariably directed towards the Micropyle, but when the Seed swells to a large size, this is removed by the dilatation of the Hilum to a considerable distance from the nourishing duct, being placed at the opposite end of the Hilum as in *Leguminosæ*; and by the time many of these Seeds are ripe, all traces both of Micropyle and Hilum except the cicatrix of the nourishing ducts nearly vanish; the original disc of the Hilum is however often concave. After the Radicle comes out of the fleshy coat at the Micropyle, the facility with which it forces a passage through other substances is astonishing, rarely turning out of its way, but piercing an adjacent Seed of the opposite cell in those Capsules which do not split, or the membranous coat of the Capsule itself, apparently with as much ease as the lightest earth, and often in a direction contrary to gravitation. Any Botanist desirous of seeing this, needs only to tie a piece of Muslin round the Capsule of *Amaryllis longifolia* L. a little before it is ripe, and by placing that afterwards in any moist part of the Stove, he will soon find the Seeds sewed together by their Radicles, as completely as by a piece of String, see *Tab. fig.* Before the Plumula or first Leaf is evolved an incipient Bulb forms at its base the outer coat of that being part of the Cotyledon, to which physical law I know no exception, though the Deity has probably ordained, that no physical law shall be universal, having in *Cyamus* afforded us an instance of the Embryo germinating without pushing out its seminal Radicle. The 1st Section of *Amaryllideæ* is distinguished by the Leaves, which continue vegetating during the whole year; and here, treading in the very last steps of Dryander I only refer to *Crinum* those species which have large lingulated Leaves; Tube of Corolla straight when fully expanded, not curved, scarcely wider at the top, continuing fresh and juicy like the Pericarpium often nearly as high as the Limb till the Seeds ripen in most Species, if not all; Limb salver-shaped, with recurved strap-shaped Segments generally equal in breadth; Filaments in a single series at the very margin of the Tube, not decurrent but more or less knobbed at their base, often slightly irregular by being approximated towards the lower side; and the Style always slightly reclinated. Formerly in Paradisus Londinensis I combined all the perennial-leaved Species of the Order under *Crinum*, but Dryander convinced me that it would be much better to exclude those of *Sierra Leone* as well as the *Cape* of *Good Hope,* and the Genus as he defined it in the 2nd edition of Hortus Kewensis is sufficiently numerous, containing at least a dozen Species. *Tænais* is so named from the disposition of its Corolla to be striped with red Bands, and contains those false *Crinums* as Dryander used to call them, which have more delicate Leaves often attenuated towards the top; a long Tube somewhat curved, cylindrical nearly to the very top, continuing fresh and juicy as in *Crinum*; Limb more or less irregular and bellied on the lower side; Filaments inserted at the top of the Tube in one series, and not decurrent. *Crinum Yuccæflorum* P. L. is my type of this Genus, and another figure of it by the *Hon. Mr.* Herbert has been published by *Dr.* Sims, so faulty with respect to its Leaves, that they rather re-

semble those of some *Eryngiums.* I am not sure if any Species in *Asia* belongs to *Tænais*, but all those we have received from *Sierra Leone* and the *Guinea* Coast do; and one of them, *Crinum Giganteum* of the Botanist's Repository was ridiculously so called, owing to the blunder of a *Scotch* Gardener, as it is by no means a very large Plant; but a little before it was first figured by THOMPSON in 1798, I had proposed the name of *Gigas* for a true *Crinum* in the *Marchioness* of ROCKINGHAM's collection, just sent to her from *Port Jackson*, the *Pedunculatum* of *Mr.* R. BROWN, which is really gigantic in size; and this *Scotch* gardener happening to be present in the Stove at its christening, when he returned to LEE and KENNEDY's, mistook one of the *Sierra Leone* Plants given to them by the *Marchioness*, for a young sucker of that from *Port Jackson*, and told them it was so called, transforming by his Northern pronounciation *Gigas* into *Jagus*, in which latter way the name is printed in the work above mentioned; afterwards when the figure of the Botanist's Repository came out, *Mr.* KENNEDY changed *Jagus* into *Giganteum*. *Amaryllis Ornata* L. FIL. is a species of *Tænais* very distinct from all those introduced by AFZELIUS, or FRANCESCO BORONE, and I fear now lost here, for I have not seen it, since I left *Chapel Allerton*; my Bulb was given to me by the *Marchioness* of ROCKINGHAM, being an offset from the identical plant described by the younger LINNÉ, and though it continued healthy, flowering annually till I left that place, I never could get a Seed from it or more than 2 Offsets in all that period; this Species grows wild near *Cape Corso* erroneously called *Cape Coast* by our English sailors, and may be known 1st by its size, equal to *Mr.* KENNEDY's *Giganteum*, the Leaves of a pale yellowish green, tender in substance, not much undulated, only a little crenulated towards their base, with nerves fine and prominent on both surfaces; 2ndly, its flowers have a disagreeably sweetish smell, are of short duration, in my plant being constantly 4 or 6 in number, half of which expanded one day, the other half the next; 3rdly, the inside of its Tube has 6 little hollows between the bases of the Filaments, and the Limb is much more ventricose on the lower side; 4thly, the points of its Petals decay at a very early period, while cohering in the Flowerbud some days before they separate. EHRET's figure quoted by LINNÉ very carelessly in *Syst. Nat. ed.* 10. for *Amaryllis Longifolia*, and afterwards in *Syst. Veg. ed.* 12. for *Crinum Zeylanicum* is more like *Ornata* L. FIL. than any other, and I believe to have been delineated from it, though coloured with too bright tints, which was EHRET's only fault. No less than four different Plants have at one time or other been confounded by LINNÉ under his *Crinum Zeylanicum*: the 1st above described, which his son saw when he was here in the *Marquis* of ROCKINGHAM's collection at *Wimbledon*, and separated by that name: the 2nd is *Tolabo* (not *Tolabo minor*) of the *Cingalese*, figured in COMMELIN's *Hort. Amst. v.* 1. *t.* 73. What Genus this belongs to I cannot say, it never having been introduced here to my knowledge, though it may be among those lately sent by *Dr.* WALLICK; its Leaves, which I only know from a specimen in the *Banksian* Herbarium sent from *Am-*

sterdam, and from another gathered by *Dr.* RICHARDSON in the same Garden, somewhat resemble those of *Aletris Uvaria* L. being gradually attenuated and finely crenulated with very close equal teeth, like a Horse's Curry-comb: the 3rd LINNÉ took up solely from a drawing now in the *Banksian* Library, made by HERMAN himself, a reduced figure of which is given in that famous Botanist's *Hort. Lugdb. p.* 682. and this is no doubt a true *Crinum*, the *Toxicarium* of ROXBURGH and RUMPF, which ancient name ought surely to be retained: the 4th is *Belatta Pola Taly* of RHEEDE, and likewise a true *Crinum*, *Asiaticum* of ROXBURGH; nor can I follow *Mr.* J. B. KER either in changing this to *Detitum*. My next Genus, *Erigone* is I believe confined to the *Cape* of *Good Hope*, where it grows in moist grounds and by the side of Rivers; the Tube of its Corolla is a little curved and often very long, as well as slightly widened towards the top; Limb nearly regular, but its upper Segments a little more recurved, and the inner ones broader; Filaments inserted in two very close series, and a little decurrent in which they differ from those of *Tænais*; the Leaves of every Species are very long, and so finely attenuated as to dangle on the ground in all directions, soon decaying at the top. In the 2nd Section of *Amaryllideæ*, distinguished by Leaves which disappear as soon as the heats of Summer commence, *Palinetes* contains two Species known immediately by their glaucous falcated crenulated Leaves; these all wither down to the Bulb at their appointed season; but the inner ones, the points of which were perfect and entire, shoot out again the following autumn with a truncated end, then becoming outer Leaves, and decaying entirely to their base the succeeding Summer, which curious œconomy has suggested my name. *Boophone* is so called, because its Leaves are dreadfully poisonous to the *Oxen* and *Cows* of the Farmers in the districts where it grows; and unfortunately those Animals do not avoid them by instinct; they are glaucous and bifarious, forming a Fan at the top of a long Bulb which stands half way out of the Ground, like a *Leek*; its Petals coalesce into a pretty long slender Tube, beyond which they roll back and are hardly irregular, with diverging Filaments; I have never found more than 1 Seed in each Cell of a great many specimens examined before fœcundation, and most liberally conceded for that purpose, by BURCHELL. *Crossyne* has 4 or 6 bifarious Leaves, tongue-shaped, and edged with a broad scarious Membrane a little plaited, as well as cut into finely attenuated Segments intermixed with Hairs; and it is singular that these Segments are often in different directions even on the same Leaf, some looking towards its top, others towards its base; this fringed Membrane in some Bulbs is of a pale ferrugineous cast, but in others dark chestnut colour with finer Hairs, and as their Leaves are not quite of the same shape, they may possibly be distinct Species; its Flowers are very similar to those of *Boophone*, and have diverging Filaments, but their Tube is so short I dare not join them as Congeners: LINNÉ's son in the *Supplementum* says that this Plant is his father's *Hæmanthus Ciliaris*, determined in the 2nd edition of his *Species Plantarum*, from a Leaf pasted on the same paper with

Flowers of *Hæmanthus* in OLDENLAND's herbarium; but I suspect that to be my *Diacles Ciliaris*, described by the name of *Hæmanthus Africanus sive Tulipa Africana flore albo*, in BURMAN's Catalogue of Plants which OLDENLAND and HARTOG collected; a point which may probably now be ascertained at *Paris*, as that Herbarium is in *Mons.* DELESSERT's possession. *Amaryllis* was established by LINNÉ, as appears in *Hortus Cliffortianus* from *Belladinum* of the *Italians*, and I cannot agree with the *Hon.* WM. HERBERT to change his name; the Leaves decay here soon after Midsummer, those of the next year not appearing till Spring in our cold climate, long after it has blossomed in *September*; the Petals coalesce into a short obpyramidal Tube, above which they diverge into a Funnel and are nearly regular, with reclinated Filaments and Style. *Brunswigia* was very justly established by HEISTER, one if not two more Species being now discovered, which agree with his type minutely in their Flowers; but *Mr.* J. B. KER, by referring every Species of the Order to *Brunswigia*, which has an obpyramidal Capsule on a long Pedicel, in my opinion totally mistakes its essential character; this I hold to consist in the peculiar irregularity of its floral Envelope, swelling out boldly in front at the base, but gracefully recurved towards the top; and its strict conformity in the 3 Species hitherto known, if two really exist with lorate Leaves, will unquestionably keep them separate under that illustrious name from all other *Amaryllideæ*; the Capsule of that called *Josephiniæ* by REDOUTÉ has rounded lobes, not at all comprest, and many Seeds in each cell, exactly like green Peas, in one of which I found 2 Embryos. In *Loxanthes*, the Petals coalesce into a very short obpyramidal Tube without any coronary process, beyond which 5 or sometimes all 6 are curved towards the upper side; while the Filaments are closely approximated round the Style in a contrary direction; both the Leaves and Capsules of this Genus differ as remarkably as in *Brunswigia*, and its Seeds likewise occasionally contain 2 Embryos. *Orexis* approaches so closely to *Loxanthes*, that its Tube projecting into a winding Ring behind the Filaments, joined to their extreme length and divergence, chiefly separate it; but the Leaves, as well as those of the next Genus *Lycoris*, continue growing later in Summer, and not having seen ripe Seeds of these two *Chinese* Plants, in guessing that they are bulbiform and without Albumen, I trust solely to their solid Peduncle. *Lycoris* has been detached by the *Hon.* WM. HERBERT, and I gladly adopt his name, instead of one in my paper read at the Horticultural Society's meeting of *March* 1812; neither is it a jot more fanciful than *Andromeda* of LINNÉ, but every way worthy of *Helga's* bard, for

Botanicis " *atque Poetis*
" *Quidlibet audendi semper fuit æqua potestas*
" *Hoc opus, hoc studium, parvi properemus et ampli.*"

The whole Flower serves to remind us of the grinning jaws of a *Wolf*, and his description of its Stigma, as that usually coheres in our climate, does him credit; but the more essential character of its 6 retuse Lobes, which form a coronary process behind the Fila-

ments, as in the greater part of *Zephyrantheæ* has escaped him. The next Genus, *Imhofia* of HEISTER is characterized by Petals very much rolled back, and only united for a very short space at the bottom by their discs; with very long Filaments and Style approximated into a bundle like the Roman Fasces, either erect or a very little reclined towards the lower side: it is so called after a noble *Brunswicker*, who was a patron of Botany, and procured many Bulbs for the *Helmstadt* garden, from *Governor* TULBAGH: it has also lately been separated under two other names, *Galatea* and *Nerine*, by the *Hon.* WM. HERBERT; the first of these, which in the Horticultural Transactions of 1812, I had applied to a Genus of *Ensatæ*, being ignorant like him that it was already occupied by a *Vermis*, he has himself given up; in the second, he no doubt alludes to the Shipwreck, by which the Bulbs of the *Japan* species are said to have been cast away on the sandy shores of *Guernsey*; whether that be true or not however, all the Species of *Imhofia* so far from liking Saltwater, thrive much better on the shelf of a dry Stove, roasting during the months they are without Leaves, as in their own native arid hills; by such treatment, with no other care than a plentiful supply of water when their Leaves were vegetating, and repitting them into fresh light loam without cutting off their fibres, every other year, out of half a dozen Bulbs of the *Guernsey Lily* in my collection at *Chapel Allerton*, three or four never failed to blossom annually quite as boldly and vigorously as those imported. The *Hon.* WM. HEBBERT doubts if this Species be indigenous in *Japan*; but besides THUNBERG and KÆMPFER who both say it is, and that the inhabitants regard the Bulb as poisonous, CORNUTUS had told us that one brought from thence, flowered in MORIN's garden at *Paris*, during *October* 1634; and this geographical anomaly, if it can be so called, is lessened not only by the two preceding Genera, which grow wild in *China*, but by some in other Orders, common to *Japan* and the eastern side of the *Cape* of *Good Hope*; for instance *Podocarpus*, *Sophora Japonica*, and *Pittosporum Tobira*. *Periphanes* has Petals only united by their discs into a short Tube shaped like the nave of a Wheel, as in *Imhofia*; but its Filaments are short, recurved, quite regular, inserted in a single series a little confluent at their base; and its revolute Stigmata are far longer than in any other Genus of *Amaryllideæ*. Lastly, *Carpolyza* of *Paradisus Londinensis*, after being tossed about in *Hæmanthus*, *Crinum* and *Amaryllis* is joined to *Strumaria* by *Mr.* J. B. KER, notwithstanding its perigynous Filaments; but exclusive of that important character, its Petals are not detached at their margins down to the Pericarpium, as in *Periphanes*, *Imhofia*, or *Amaryllis*; and the segments of its Stigma are emarginated; its Foliage however helps to make it the connecting link of the two Orders, and it differs essentially from *Periphanes* in its Filaments inserted in two series.

Ord. 6. STRUMAREÆ.

Pericarpium 3-lobum, 3-loculare, membranaceum, ab apice 3-valve. Petala 6, basi coalita nunc tantum disco, dein varie patentia, oblonga,

regularia, marcescentia. Filamenta 6, disco pericarpii 1 vel 2 seriebus inserta, regularia, nunc 1-delpha aut Stylo accreta, marcescentia. Antheræ vacillantes, 2-loculares, 4-valves. Glandula mellifera nunc immersa, in axillis filamentorum quæ Septis insistunt. Stylus erectus, sæpe strumosus vel alatus. Stigma varie 3-fidum. Semina 3–5 in singulis loculis, parva, bulbiformia omnino ut in *Amaryllideis. Herbæ in Promontorio* Bonæ Spei, $\frac{1}{2}$–$1\frac{1}{2}$-*pedales. Bulbus ovatus, Tunicis membranaceis. Stipula albida sanguineave, vaginalis, in multis dum marcescit ab apice involuta et* Pezizam *referens, nunc deficiens. Folia* 2–7, *angustissima latave, glabra vel retrorsum pilosa, autumno prodeuntia, fine veris evanida. Flores albi ochroleuci roseive, erecti. Pedunculus ante vel simul cum foliis, extra vel intra stipulam, hactenus non anceps, solidus,* 5–20-*florus. Pedicelli nunc longissimi. Bracteæ* 2, *spathaceæ ; præter ramentaceas.*

Sect. 1. Filamenta Stylo libera vel ejus basi modo confluentia.

Strumaria, Jacq. Petala lanceolata. Filamenta petalis breviora, 1 serie inserta, inter se et a Stylo libera, lanceolato-attenuata. Glandulæ 3 melliferæ immersæ. Stylus inferne in globum 6-angulum tumens. Stigma 3-lobum. *Bulbus magnitudine* Pisi. *Stipula albida, parum seu non exserta. Folia* 2–3, *angustissima, læte viridia, humifusa, linearia, glabra, carnosa. Flores albi cum rubore extus, inodori. Pedunculus simul cum foliis intra Stipulam, paulo latior præcipue versus apicem, teretiusculus,* 5–9-*florus. Pedicelli longissimi. Bracteæ nullæ ramentaceæ. Species* 1. Leucoium Strumosum Soland.

Gemmaria. Petala parabolica, undulata, basi intus Vitri instar lucida. Filamenta petalis breviora, 2 seriebus imâ basi Styli confluentia, patentissima. Glandulæ 3 melliferæ immersæ. Stylus basi valde tumens. Stigma 3-lobum. *Bulbus magnitudine Ovi* Columbæ. *Flores ochroleuci, inodori. Pedunculus ante folia, teres,* 7–12-*florus. Pedicelli longissimi. Stipula nulla, saltem extra bulbum. Folia* 2–3, *pedunculum mox ad latus sequentia, parum spatulato-lanceolata, juxta marginem villis retrorsis aspersa, planiuscula. Nomen a basi Petalorum Vitrum simulante. Species* 1. Strumaria Gemmata Ker *in Bot. Mag. No.* 1623.

Eudolon. Petala lineari-lanceolata, undulata. Filamenta petalis longiora, basi in cyathum coalita. Stylus totus 3-angulus, supra basin incrassatus. Stigma 3-partitum. *Stipula atro-rubra, mox apice involuta. Folia* 3–4, *circiter* 4 *lineas lata, parum falcato-linearia, glabra. Flores carnei, inodori. Pedunculus extra stipulam, foliis longior, teretiusculus,* 5–9-*florus. Pedicelli longi.* ευ *bene* δολων *decipiens, facie sequentis. Species* 1. Strumaria Undulata Jacq.

Sect. 2. Filamenta 3 stylum longe decurrentia.

Stylago. Petala spatulato-lanceolata. Filamenta petalis multo longiora, in cylindrum 6-sulcum fere usque ad medium coalita. Stylus basi cylindricus, dein 3-angulus. Stigma 3-partitum. *Stipula nulla. Folia* 4–5, *erecta,* 3 *lineas lata, parum torta, linearia, glabra. Flores pallide rosei, inodori. Pedunculus ad latus foliorum, longior et gracilis, teres,* 7–10-*florus. Pedicelli* $1\frac{1}{2}$-*pollicares. Nomen*

a filamentis stylum circumvallantibus. Species 1. Strumaria Rubella Jacq.

Pugionella. Petala spatulata. Filamenta petalis vix breviora, basi in cyathum 6-sulcum coalita. Glandulæ 3 melliferæ emarginatæ prominentes. Stylus inferne paulo crassior, membranis 3 in Pugionem desinentibus alatus. Stigma 3-partitum. *Stipula sanguinea, apice mox involuta. Folia 2–3, erecta, 2 lineas lata, linearia, glabra. Flores albi cum rubore, halitu nauseoso* Martagonum. *Pedunculus extra stipulam, foliis longior, gracilis, teretiusculus, 7–10-florus. Pedicelli ½–1½-pollicares, tardi ut priorum Capsulæ maturæ antequam ultimi floruerunt. Species* 1. Strumaria Angustifolia Jacq.

Hymenetron. Petala lanceolata. Filamenta petalis parum longiora, basi in cyathum coalita. Stylus inferne crassior, membranis 3 alatus. Stigma 3-partitum. *Stipula* Pugionellæ. *Folia 4–7, anguste lingulata, glabra. Flores albi cum rubore, in unâ suaveolentes. Pedunculus extra stipulam, foliis longior, compressiusculus, 10–20-florus. Pedicelli longiusculi. υμην membrana ητρον venter. Species* 2. Strumaria Truncata, Linguæfolia, Jacq.

A small Order, growing wild at the *Cape* of *Good Hope*, and very closely allied to *Amaryllideæ*; but having epigynous Filaments and generally a sheathing Stipule, according to A. L. de Jussieu's Method, it ought to be placed in his 4th Class of *Monocotyledones.* Here nevertheless that consummate Botanist will no doubt sacrifice his own laws on the holy altar of Nature, and leave *Strumareæ*, as he has *Galantheæ*, with their perigynous neighbours in his 3rd Class. They have been referred to one Genus by Jacquin from whom I merely differ in calling all such combinations as this, an Order; and any one or more Species among them, unlike the rest in certain material points, a Genus. The number of vegetables at present discovered, to say nothing of those undiscovered, comes much nearer to Commerson's calculation of all which are in existence on the earth, than to Linné's; affording in itself a powerful argument, if there were no other, for the multiplication of Genera; and the labours of several eminent Botanists in this branch of the Science, are rapidly proving, that if every species admitted into a Genus corresponded more strictly with the type in its organs of Reproduction, ten times as many as are now established, would make Botany ten times more easy to learn, and ten times more delightful when learnt. None of these penultimate Groupes can rest on a solid foundation, till all the Species in them have been carefully compared, the differences of which often run gradually into one another, or can only be detected in a living state. Hence Solander, who preferred dried Specimens that he might not use characters liable to disappear in an Herbarium, fell into the error of describing *Agapanthus* with a regular Corolla; nor has *Strumaria* any immediate affinity to *Leucoium*, as he supposed. Dryander on the contrary never trusted to a dried Plant if he could see it living; and Jacquin has most happily exprest my ideas of what is necessary to a Generic assemblage in the following lines, partly Ovid's,

"*Par cunctis facies, qualem decet esse sororum*
"*Et diversa tamen eadem est gratia formæ*
"*Ut mox agnoscas, quâ sint de stirpe creatæ.*"

Strumareæ however differ far too much both in their Leaves and Flowers to exemplify them; and whether future Botanists follow me or not in regarding these Plants as an Order, their most essential diagnostic does not consist in a strumous Style, or its accretion to the Filaments, but in the insertion of the latter on the Pericarpium; for both in *Strumaria* and *Gemmaria*, the Filaments are completely detached from the Petals, and in *Eudolon* the Style is not at all thicker than that of many other *Spathaceæ*. The Order at present may be conveniently divided into two Sections, in the 1st of which the Filaments are quite separated from the Style, or only confluent with its base. *Strumaria* differs widely from the other Genera in its whole Habit, having a small Bulb, one or two white Stipules, very narrow gramineous Leaves like those of *Carpolyza* in the preceding Order; Peduncle coming up at the same time within the Stipules; lanceolate Petals; Filaments shorter than the Petals, broad at their base, yet not 1-adelphous; with a Style so much swelled at its base as to resemble a Pericarpium superum. In *Gemmaria* the Peduncle is naked, pushing up just before its Leaves, which are broadly linear-lanceolate, and bearded with reflexed hairs, near their sides especially, approaching to those of *Hæmanthus Quadrivalvis*; Pedicels exceedingly long; 3 immersed melliferous Glands in the axils of its upper Filaments, not 6 as *Mr*. J. B. KER imagines; for though the base of each Petal shines brilliantly, a close investigation proves it to be quite dry and hard as Glass. *Eudolon* the next Genus is so called from its resemblance to *Stylago*, but it has the blood-coloured Stipule of *Hymenetron*, and a Style 3-angular from top to bottom. In the 2nd Section of *Strumareæ*, their alternate Filaments coalesce with the angles of the Style for a considerable length. In *Stylago*, that female part is cylindrical below them, a most singular character here, and this Plant has no Stipule, at least above ground; whether any may lay hid between the Coats of its Bulb, remains to be ascertained. In *Pugionella*, the angles of the Style terminate in 3 Disks, for which difference however I should hardly have separated it from *Hymenetron*, if that had not been attended with 3 heart-shaped melliferous Glands in the axils of those Filaments which are not attached to the Style. Lastly, *Hymenetron*, from its similarity to many *Hæmantheæ* now discovered, closes the Order; this has a blood-coloured Stipule, rolled down inwardly from the top as it decays, and then not unlike some Pezizas; a Peduncle on the outside of the Stipule; narrowly tongue-shaped smooth Leaves; and according to JACQUIN, no melliferous Glands; but I suspect that an immersed Pore similar to that of *Strumaria*, will also be found in this Genus, at the base of those Filaments which are inserted upon the dissepiments.

Ord. 7. HÆMANTHEÆ.

Pericarpium albidum coccineumve, ovale, pulposum, 3-loculare

septis axi confluentibus et demum a pariete solutis ubi Funiculum simulant, non dehiscens. Petala in Tubum plus minus coalita, inde in Limbum varie expansum regularem disjuncta, sero post marcuerunt decidua. Filamenta 6, ore tubi 1 vel 2 proximis seriebus inserta, limbo longiora, regularia. Antheræ vacillantes, 2-loculares, 4-valves. Stylus nunc filamentis altior, erectus. Stigma parvum, 3-fidum. Semina 1–2 in singulis loculis, ab apice Septorum pendula, sessilia, magnitudine grani *Coffeæ*; Tunica ochroleuca, membranacea; Albumen durum; Embryo axi brevis; Radicula hilo versa. *Herbæ in* Africa Æquinoctiali *et* Australi, 9–18-*pollicares. Bulbus formâ varius. Stipulæ* 1–2, *ad basin pedunculi inclusæ; vel* 3–4, *vaginales, sensim foliaceæ; Folia* 2–5, *extus sæpe maculata, bifaria, rarius petiolata, ovalia lingulata spatulatave, glabra vel pubescentia, nunc spiraliter torta, per dimidium modo anni vel in unâ constanter vegeta. Flores albi rosei aut sæpius miniati. Fasciculus densissimus. Pedunculus ante vel cum foliis novis e latere bulbi, crassus, compressus, solidus. Pedicelli graciles. Bracteæ* 4–8, *spathaceæ; in aliis petaloideæ et diu vegetæ; præter ramentaceas.*

Melicho. Petala in Tubum brevissimum obpyramidatum coalita; dein patentia, spatulato-lanceolata apicibus non callosis. Filamenta 1 serie, subulata, inter se discreta. *Herbæ in Promontorio* Bonæ Spei, 7–12-*pollicares. Bulbus* Hæmanthi. *Flores carnei roseive, inodori. Fasciculus* 2–50-*florus, sæpe laxus. Pedunculus mox ante folia autumno, erectus, sæpe pubescens. Pedicelli inæquales. Bracteæ* 5–7, *spathaceæ, floribus breviores, mox emarcidæ. Folia* 2, *lingulata vel spatulato-lanceolata, nunc pubescentia pilis retrorsis, æstate evanida. μελι mel χεω fundo. Species* 6. Hæmanthus Amarylloides, Pumilio, Lanceæfolius, Humilis, Sanguineus JACQ. Carneus KER.

Diacles. Petala in Tubum brevem infundibuliformem coalita; dein erecto-patentia, lineari-lanceolata apicibus non callosis. Filamenta 2 proximis seriebus, basi nodulosa, inter se discreta. *Herbæ in Promontorio* Bonæ Spei, 6–9-*pollicares. Bulbus* Hæmanthi. *Folia* 3–4, *lingulata, pubescentia, in unâ fimbriata, æstate evanida. Flores albi, inodori. Fasciculus* 30–60-*florus, corymbosus. Pedunculus axillâ foliorum novorum autumno, arcuatus, pubescens. Bracteæ* 6–7, *spathaceæ, virides sed inter nervos hyalinæ unde nomen, floribus parum breviores, diu vegetæ. Species* 2. Hæmanthus Ciliaris MS. *fig. in Bot. Mag. et Reg. No.* 1239 *et* 382. Pubescens L. *quæ* Albiflos JACQ.

Hæmanthus, J. L. T. HERM. Petala in Tubum brevem infundibuliformem ad basin filamentorum 6-gibbum coalita; inde erecto-patentia, spatulata apicibus in Callum album desinentibus. Filamenta 1 serie, limbo longiora, medio parum crassiora, inter se discreta. *Herbæ in Promontorio* Bonæ Spei, 6–12-*pollicares. Bulbus sæpe magnitudine* Pugni; *Tunicis crassis bifariis truncatis. Stipulæ* 1–2, *ad basin pedunculi fere totæ inclusæ, præmorsæ. Flores miniati, nunc odore* Moschi, *erecti. Fasciculus* 30–80-*florus, corymbosus. Pedunculus ante folia autumno,* 6–10-*pollicaris, erectus, maculatus. Pedicelli breves. Bracteæ* 4–8, *miniatæ, amplæ, et Antheras superantes adeo ut totus Fasciculus flori* Camelliæ *haud absimilis, diu*

vegetæ. Folia 2–4, *sessilia, lingulata vel spatulata, basi extus sæpe maculata, glabra vel pubescentia, in cunis parallela, æstate evanida. Species* 6. H. Rotundifolius BURCH. Hyalocarpus, Quadrivalvis, Tigrinus, Coarctatus JACQ. Coccineus L. *Alia forsan foliis loratis spiraliter tortis servatur in Herbario* Banksiano.

Gyaxis. Petala in Tubum brevem urceolatum 6-sulcum coalita; inde patentia, anguste lanceolata. Filamenta 1 serie, limbo longiora, subulata, inter se discreta. *Herbæ in* Krakakamma *dumetis,* 7–10-*pollicares. Bulbus conicus, Tunicis tenuibus, basi infra fibras latâ solidâque ut in Polianthe. Stipulæ* 2–3, *vaginales, sensim foliaceæ. Folia* 3–4; *Petioli vaginales et cum Stipulis caulem simulantes; Laminæ late ovales, undatæ, in cunis convolutæ; per totum annum vegeta novis ante priora marcescunt pullulantibus. Flores pallide miniati, inodori. Fasciculus* 40–70-*florus, corymbosus. Pedunculus ad latus foliorum initio æstatis, erectus, maculatus. Pedicelli breves. Bracteæ* 6–8, *virides cum maculis, floribus breviores, sub florescentiam vegetæ.* γυης *fossa* αξις *axis. Species* 1. Hæmanthus Puniceus L.

Nerissa. Petala in Tubum gracilem anguste infundibuliformem coalita; inde stellata, anguste spatulata. Filamenta 1 serie, limbo longiora, subulata basibus in cotylum confluentibus. *Herba in* Sierra Leone *umbrosis,* $1\frac{1}{2}$-*pedalis. Bulbus sphæricus, Tunicis tenuibus; basi intra fibras Turionem unum alterumve ad distantiam pedis excurrentem apice foliigerum et mox bulbigerum protrudens. Stipulæ et Folia* Gyaxeos, *sed lætius viridia et majora,* Novembri et Decembri *apud nos evanida. Flores sanguinei, inodori. Fasciculus sæpe* 100-*florus, subrotundus. Pedunculus ex imâ stipulâ ad latus foliorum novorum* Aprili, Maio, *paulo brevior, erectus, maculatus. Pedicelli* 1–2-*pollicares. Bracteæ* 5–6, *virides punctis rubris, floribus breviores et mox emarcidæ.* νηρος *humidus. Species* 1. Hæmanthus Multiflorus L.

I have no scruple in detaching *Hæmantheæ* from both the true and false *Amaryllideæ,* as they differ materially in their pulpy fruit and seeds; the latter are pale yellow, 1 or 2 in each cell pendulous from the top, and though they have some appearance of being bulbiform, full of Albumen with a thin Coat and pretty large Chalaza. Of the additional species now discovered at least half cannot be joined to HERMAN's original type of *Hæmanthus,* and two of those left in it by LINNÉ, are still more discordant both in Leaves and Flowers. *Melicho,* my first Genus, contains those which have smaller and less conspicuous Bractes, soon withering, whitish or pale flesh-coloured Petals only cohering into a very short Tube, not callous at their extremity; and they evidently connect the preceding Order of *Strumareæ* in a natural series. *Diacles* may be instantly known by its Bractes, the difference in them being accompanied by others of more importance; these have strong green Nerves, between which they are more or less transparent, in *Ciliaris* MS. very like those of *Eranthemum* L. and affording another analogy between *Monocotyledones* and *Dicotyledones*; its Petals coalesce into a very short Tube, not gibbous behind the insertion of its Filaments, which are inserted in two close series; the Peduncle comes up a very little before, or generally with the young Leaves in one of their axils, and the latter

are pubescent, in one Species having a strong marginal Fringe. To *Hæmanthus* I only refer those which agree with HERMAN's original type, *Coccineus*, in the following diagnostics; 1st a Bulb with thick truncated Coats; 2ndly from two to four sessile bifarious Leaves, generally very broad and tongue-shaped; 3rdly Flowers in a very dense corymbose Fasciculus; 4thly, very large Bractes, erect, reaching as high or above the Anthers, of the same red-lead tint with the Petals, so that the whole Fasciculus resembles one large polyandrous Flower on a thick Peduncle; 5thly Petals coalescing into a short Tube gibbous behind the insertion of the Filaments, spatulated and terminating in a white Callosity; 6thly, Filaments inserted in a single series, a little thickened in their middle, and longer than the Petals. It is probable, that every Species of this Genus may be multiplied to an unlimited extent by an operation, which like many facts of more consequence, was discovered accidentally. Every one knows that the Bulbs protrude a little above ground, especially those of *Quadrivalvis*; and while my gardener was cleaning the surface of the earth in a pot containing one of that Species, which was done by taking off a thin slice with a knife, so as not to disturb any fibres risen up to the top, he cut the Bulb horizontally into nearly equal parts, owing to a sudden jolt of his elbow by a labourer passing him. Afraid to mention what had happened, he replaced the upper parts exactly on their lower Halves, and earthing up the Pot nearly to its Brim, set it as usual to be kept dry on a shelf of the Stove. This was late in *June*, about a month after its Leaves had decayed; in *September* following, I never shall forget the joy with which he brought the Bulb to me, a strong Flower-bud pushing up with two Leaves ready to follow it on one side, and the four wounded Coats, for this Species seldom has more above the surface, were studded at their margin with a Necklace of numerous little Bulbs, some of the strongest of which blossomed three years afterwards. *Gyaxis* has a conical Bulb with thinner membranaceous Coats, and a broad fleshy solid stump under the Fibres, somewhat like that of *Polianthes*; the Leaves are petiolated, oval, waved, convolute before they unfold, and continue to grow throughout the year, the old ones never decaying till fresh ones are fully developed; the Peduncle rises at the side of the young Leaves from the stronger Bulbs before the summer solstice; the Bractes are green with red Spots, but shorter than the Flowers, and not conspicuous as in *Hæmanthus*; Petals lanceolate, without any white terminal callosities, and they coalesce into an urceolar Tube which has 6 deep furrows; Filaments inserted in one series, and awl-shaped: this Plant was sent to *Myn Heer* SIMM BEAUMONT and cultivated in his celebrated garden at the *Hague* before 1690, but as there was no certainty from what part of *Africa*, DRYANDER from its Habit not believing it indigenous at the *Cape* of *Good Hope*, would not insert it as such in the 2nd edition of Hortus Kewensis; and his conjecture turns out to be partly correct, for BURCHELL never saw it till he reached *Krakakamma*, 800 miles eastward of *Table Bay*, where it grows wild abundantly under the bushes. *Nerissa* is another very legitimate Genus, as *Mr.* J. B. KER thought in the

1075th number of the Botanical Magazine, agreeing with *Gyaxis* in Habit; but the Bulb differs greatly being more sphærical after the Leaves have pushed up, its solid base small, and there sending out among the Fibres one or two jointed Suckers, which after running horizontally to the distance of a foot or more terminate in Leaves, and a Bulb is soon formed by the returning tap deposited at their bases, see *Tab.* . Leaves of a brighter green, larger and not so much waved as in *Gyaxis*, their long sheathing Petioles and Stipules forming an apparent Stem variegated with dark red Blotches and Spots, all decaying together here about *November* or *December*; Flowers often as many as a 100 in a round headed Fasciculus; Peduncle rising up from one of the lower Stipules with the fresh Leaves in *April* or *May*; Bractes green with small red Specks, much shorter than the Flowers, soon reflexed and withering; Pedicels slender, from 1 to 2 inches long; Petals blood-colour, coalescing into a long narrowly funnel-shaped Tube, then diverging into a Star, and narrowly spatulated; Filaments blood-colour, inserted in one series and dilated into a saucer at their base as in *Massonia*: this beautiful Exotic grows wild in moist woods at *Sierra Leone*, and will not thrive here without more constant heat than the rest of the Order; it requires a light vegetable soil mixed with loam, never suffering that to be quite dried, even when the Bulb is at rest, and the Leaves decayed. At *Chapel Allerton*, it was cultivated in the Bark Stove under the shade of taller Plants, and by repeatedly shaking the Honey out of the Flowers, they were often succeeded by its large scarlet Berries containing perfect Seeds, one of which beginning to germinate is here delineated *Tab.* .

Ord. 8. ZEPHYRANTHEÆ.

Pericarpium figurâ varium, 3-loculare, membranaceum, ab apice 3-valve. Petala 6, coalita in Tubum fere constanter brevissimum, cylindricum turbinatum infundibuliformemve, ore in plurimis pone vel inter filamenta squamigero annulatove; dein in Limbum basi crassitie parietis tubi, plus minus irregularem disjuncta, marcescentia vel tandem decidua. Filamenta 6, sub ore tubi inserta 1 vel 2 proximis seriebus, breviter decurrentia, plus minus irregularia, subulata. Antheræ vacillantes, 2-loculares, 4-valves. Stylus deorsum reclinatus. Stigma varie 3-fidum. Semina numero definita vel indefinita, compressa vel obovata, nunc alata; Tunica melina vel nigra, membranacea; Albumen carnosum vel duriusculum; Embryo ejus axi, Radiculâ hilo versâ. *Herbæ inter Tropicos* Americæ, *præcipue* Australis, *unâ tamen* Virginiam *attingente*, $\frac{1}{2}$–$1\frac{1}{2}$-*pedales. Bulbus ovatus, Tunicis membranaceis. Stipulæ nullæ. Folia basi 2-faria, angusta latave, in multis lorata, rarius petiolata Laminâ ovali, per æstatem evanida aut constanter vegeta. Flores omnium fere colorum, rarius fragrantes. Pedunculus axillâ foliorum vel ad latus nonnihil præcocior, solidus vel sæpius fistulosus, erectus,* 1–20-*florus. Pedicelli breves vel longiusculi, in fructu sæpius erecti. Bracteæ* 1–2, *spathaceæ præter ramentaceas.* .

Sect. 1. Seminum Tunica melina. *Pedunculus solidus.*

Griffinia, MS. Ker. Pericarpium ovale, parum lobatum. Petala in Tubum brevissimum coalita; dein lanceolata, 3 superiora plus minus approximata et recurva, 3 inferiora divergentia infimo minore. Filamentum supremum a cæteris parum sejunctum. Stigma parvum, obsolete 3-lobum. Semina 2 in singulis loculis, melina fasciâ albidâ usque ad Chalazam, basi erecta, obovata. *Herbæ in* Brazil, 7–12-*pollicares. Bulbus subrotundus. Folia* 3–4*: Petiolus linearis, semiteres: Lamina ovalis, isthmis transversis inter nervos; fere toto anno apud nos vegeta. Flores albo-violacei, nutantes, inodori. Pedunculus autumno dum unum alterumve folium adhuc restant, compressiusculus,* 6–10-*florus. Pedicelli brevissimi, vel longiusculi, in fructu patentes vel nonnihil penduli. Bracteæ interiores latiores quam in multis.* William Griffin, Armiger, *cultor felicissimus Bulborum ad* South Lambeth. *Species* 2. Amaryllis Hyacinthina Ker *in Bot. Reg. No.* 163. G. Parviflora Ker *in Bot. Reg. No.* 511.

Sect. 2. Seminum Tunica nigra. *Pedunculus fistulosus.*

Coburgia. Pericarpium alte 3-lobum. Petala in Tubum brevem, infundibuliformem, ore nudum coalita; dein lanceolata, isthmis transversis cancellata, superiora magis recurva, interiora angustiora præcipue infimum. Filamenta una deorsum reclinata. Stigma 3-lobum. Semina obovata, ob numerum parum compressa. *Herbæ in* Brazil, 12–16-*pollicares. Bulbus subrotundus. Folia* 6–7; *Petiolus sensim dilatatus et Laminâ confluens quæ spatulato-lanceolata, nunc Vittâ eburneâ per medium; toto fere anno vegeta. Flores purpurei, nutantes, inodori. Pedunculus mox ante folia nova vetustis adhuc superstitibus post æquinoctium vernum, iterumque sæpe autumno, an sic in natali solo?* 3–5-*florus, parum anceps. Pedicelli in fructu longiores et erecti.* Leopold, *Prince of* Saxe Coburg, *Plantarum Exoticarum hodie collector. Species* 2. Amaryllis Reticulata L'Her. Tænisphylla MS.

Lais. Pericarpium alte 3-lobum. Petala ut in Coburgia sed non cancellata isthmis transversis. Filamenta una deorsum reclinata. Stigma 3-fidum. Semina compressa, undique alata. *Herbæ in* Brazil, 1½–2-*pedales. Bulbus late ovatus. Folia* 6–7, *viridia, lorata, nunquam omnino evanida novis circa æquinoctia pullulantibus. Flores miniati fundo stellato, nutantes, inodori. Pedunculus* 1 *et sæpe alter, ante folia nova vere apud nos prodeuns,* 3–5-*florus, obsolete anceps. Pedicelli in fructu longiores et erecti. Nomen Poeticum, ob Stigma aliarum Pollen facile admittens. Species* 2. Amaryllis Fulgida, Crocata Ker.

Aschamia. Omnia ut in *Laide* præter Corollæ Tubum Squamis 6 inter Filamenta barbatum. *Herbæ in* Surinam, *Ins.* Jamaica, Mexico, *umbrosis ad rivos* 1½-*pedales.* Anthony Ascham, *Vicarius ad* Burniston *in comitatu* Eboracensi, "*a Lyttel Herbal*" *in* 1550 *scripsit. Species* 4. Amaryllis Reginæ, Equestris L. fil. Psittacina Ker.

Omphalissa. Pericarpium alte 3-lobum. Petala in Tubum brevem annulo trigono umbilicatum coalita, unde nomen; dein lanceolatæ, directione variæ, exteriores in unâ diu incurvæ, interiores

latiores. Filamenta ima deorsum reclinata. Stigma 3-fidum. Semina valde compressa, undique alata. *Herbæ in* Brazil, 2–3-*pedales. Bulbus magnitudine* Pugni. *Folia 9–13, viridia, lorata, an simul autumni fine evanida nescio. Flores virides vel miniati, nutantes, inodori. Pedunculus* 1–2, *axillis exterioribus foliorum novorum, apud nos a* Junio *in* Septembrem *protrusus, 2–5-florus, vix compressus nec anceps. Pedicelli in fructu longiores et erecti. Species* 2. Amaryllis Aulica, Calyptrata Ker.

Chonais. Pericarpium alte 3-lobum. Petala in Tubum brevem squamis 6 pone filamenta barbatum coalita; dein in Infundibulum apice recurvum parum divergentia, cuneato-lanceolata, interiora angustiora præcipue infimum. Filamenta una deorsum reclinata. Stigma 3-fidum. Semina compressa, undique alata. *Herba* $2\frac{1}{2}$–3-*pedalis, patriâ adhuc incertâ forte* Brazil. *Bulbus late ovatus. Folia 6–8, viridia, lorata, sero autumno apud nos evanida. Flores albidi Vittis rubris, nutantes, odore florum* Sambuci. *Pedunculus ad latus foliorum novorum post* Æquinoctium Vernum, 2–6-*florus, teres, valde cavus. Pedicelli in fructu longiores et erecti.* χωνη *infundibulum. Species* 1. Amaryllis Vittata L. fil.

Myostemma. Pericarpium et Semina ignota. Petala in Tubum brevissimum valde obliquum annulo fimbriato repando clausum coalita; dein recurva præcipue superiora, lanceolata, interiora latiora. Filamenta una deorsum reclinata. Stigma 3-partitum. *Herba in* Brazil, 12–18-*pollicaris. Bulbus vix magnitudine Ovi* Gallinæ. *Folia 3–5, glauco-viridia, anguste lorata, autumno evanida. Flores lateritii, nutantes, inodori. Pedunculus mox ante folia* Aprili, *non anceps,* 4–5-*florus. Pedicelli graciles, longiusculi.* μυω *claudo,* στεμμα *corona. Species* 1. Amaryllis Advena Ker *in Bot. Mag. No.* 1125.

Sprekelia, Heist. Pericarpium et Semina ignota. Petala in Tubum brevissimum obpyramidalem Squamis 6 barbatum coalita; dein 1 erecto-recurvum maximum, 2 lateralia antrorsum flexa, 3 inferiora dependentia. Filamenta stylumque reclinata basi amplectentia; omnia lanceolata. Stigma 3-fidum. *Herba e* Mexico *circa* 1593 *in* Hispaniam *missa, pedalis vel plus. Bulbus ovatus. Folia 5–6, viridia, anguste lorata, margine scabriuscula, sero autumno evanida. Flos puniceus fundo parum stellato, intus holosericeus, cernuus, inodorus. Pedunculus cum foliis novis Aprili, Maio, secundum calorem domi,* 1-*florus, vix anceps. Pedicellus longiusculus. Species* 1. Amaryllis Formosissima L.

Arviela. Pericarpium turbinatum, 3-lobum. Petala in Tubum brevissimum ore squamulosum coalita; dein parum irregularia, nonnihil divergentia, cuneato-lanceolata, interiora angustiora. Filamenta admodum parum secunda, incurvo-patentia. Stigma 3-fidum. Semina paululum compressa absque alâ. *Herba in Ins.* Jamaicâ *montibus,* 5–8-*pollicaris. Bulbus magnitudine Ovi* Columbæ. *Folia 3–4, viridia, anguste lorata, autumno evanida. Flos nutans, niveus, odore levi* Polianthis. *Pedunculus post folia nova* Maio, *non anceps. Pedicellus longissimus.* Henry Arviel, Anglus, *de Botanicâ &c. scriptor circa* 1280, Bolognæ *commoratus est. Species* 1. Amaryllis Tubispatha Ker *in Bot. Mag. No.* 1586.

Zephyranthes. Pericarpium subrotundum, 3-lobum. Petala in Tubum brevem ore nudum coalita; dein in Infundibulum vix irregulare recurvo-patentia, cuneato-lanceolata, interiora angustiora. Filamenta vix secunda, incurvo-patentia. Stigma 3-fidum. Semina valde compressa absque alâ. *Herba a* Georgiâ *in* Virginiam *pratis madidis* 10–14-*pollicaris. Bulbus et Folia* Arvielæ. *Flos albus cum rubore levi, fere erectus, fœtidus. Pedunculus ad latus foliorum novorum quibus latior post* Æquinoctium Vernale, *vix anceps. Pedicellus in fructu longior. ζεφυρος zephyrus, ανθος flos. Species* 1. Amaryllis Atamasco L.

This Order includes all those Species hitherto referred to *Amaryllis,* which grow wild in the vast continent of *America,* another reason, besides their very different Seeds, for separating them. When RUIZ and PAVON's Flora Peruviana came out, DRYANDER remarked, that the coronary Membrane of *Narcisseæ* and *Pancrateæ* could no longer remain an exclusive character of those Orders; and this has since been fully proved by the examination of living Flowers at *Kew,* which notwithstanding they have that Membrane in both its modifications of encircling or connecting the Filaments, must unquestionably be placed in *Zephyrantheæ,* very few of which are without a coronary process of some kind, though it is not positively an essential diagnostic of the Order, an analogous Membrane being absent or present in many other *Liriogamæ*; *Orontium Japonicum* of THUNBERG, *Bellevalia Brizophile, Puschkinia, Hookera* P. L. *Tulbaghia, Fourcroya,* and *Danae* of MOENCH, afford instances. The 1st section of *Zephyrantheæ* distinguished by honey-coloured Seeds, and a solid Peduncle, only contains a single Genus; this I proposed to call after WILLIAM GRIFFIN *Esq.* who has so choice a collection of bulbous Plants, as soon as I had dissected one of the first Flowers it had produced in his Stove; for the two erect Seeds at the bottom of each cell, and whole Habit, left no doubt of its being distinct from all yet known; but *Mr.* J. B. KER in the 163rd number of the Botanical Register, united it to *Amaryllis,* then thinking he says, "*its anomalies not of a nature to render the separation of it expedient.*" He has since nevertheless come over to my opinion, and the legitimacy of the Genus is corroborated by another Species with smaller Flowers, figured in the 511th number of the Botanical Register. A full description of a Seed of this latter by *Mr.* R. BROWN is there inserted, but it does not exactly tally either with my specimen, or others which *Mr.* GRIFFIN showed me; they were simply obovate, not ventricose, their Coat (*Episperm* of RICHARD) honey-coloured, with a broad whitish Band running up the inner side from the Hilum, and encircling the Chalaza, see *Tab. fig.* . The petiolated Foliage, pendulous Fruits, binary number and colour of Seeds having a large Chalaza, serve to connect *Griffinia* with *Nerissa,* the last Genus of *Hæmantheæ*; but I do not attach so much value to these decided analogies, as I should if it were certain that no undiscovered Plants intervened in a natural series. Botanists in five or six centuries hence will probably be able to study affinities with few or none of the doubts which perplex those of the present day; let us not be

unthankful however for having been permitted to tread within the borders of that vegetable land of Promise, which to use the honied words of CORREA DE SERRA, LINNÉ like MOSES from the top of *Mount Pisgah*, was only granted a distant view of. The 2nd Section of *Zephyrantheæ* is distinguished by Seeds which have a black Coat often winged, and a hollow Peduncle. Here *Coburgia* by its petiolated barred Leaves and obovate Seeds approaches to *Griffinia*: this Genus has been joined by the *Hon.* W. HERBERT to LINNÉ's type of *Amaryllis*, changing the latter to *Coburgia*; though he was not without a suspicion that it might prove distinct, and in that case proposes to call it *Leopolda*; but confident that his Royal Highness *Prince* LEOPOLD of SAXE COBURG has too much sense to be gratified by the gross flattery of naming two Genera after him, I leave it *Coburgia*, especially as LEOPOLD late *Emperor of* GERMANY, from his patronage of Botany during the short time he reigned, has unquestionable claims to that Honour. The two next Genera *Lais* and *Aschamia* only differ in the coronary Appendage at the mouth of the Tube of the latter; but I deem it sufficient to separate them; this consists in 6 bearded Scales placed more between the Filaments than behind them, and consequently alternating with the Petals; and the Bulbs of *Aschamia* are never without Leaves here, new ones pushing up before the older decay about the *Equinoxes*, though they only blossom at the *vernal* one. *Omphalissa* agrees with *Lais*, and *Aschamia* in having very flat winged Seeds, but is so very distinct in its large 3-gonous truncated Crown that it might be referred to the Order of *Narcisseæ*, if the very different confluence of its Tube and Limb, joined to its whole Habit, did not exclude it. I after these detach *Chonais*, now thinking it too different to join any of the other *Brasilian* species in our Stoves; that it will breed with them, is by no means so philosophical an argument for their union, as it appears on the first blush; for both in *Amaryllideæ* and *Zephyrantheæ*, as in a vast many more natural Orders, the Genera are often determined by characters independant of their male and female Organs; and provided that there is a similarity in these last, I have not a doubt that Plants far more distantly related than these, may be mixed together. *Chonais* has a Corolla almost regular, funnel-shaped, and 6 bearded Scales placed behind the Filaments opposite to the Petals; and its Leaves decay here in autumn, those of the following year not appearing till Spring when it blossoms; this plant is probably indigenous in *South America*, but in what part remains to be ascertained, and all at present known is that the late *Mr.* MALCOLM who introduced it 1769, purchased his Bulb of *Messrs.* SELMEEVOOGHT and *Co.* nurserymen at *Haerlem*; *Mr.* J. B. KER has erroneously inserted it in his 5th Section of *Amaryllideæ* "*Tubo nudo.*" In *Myostemma*, the Tube is so oblique that the front is only half as long as the back, and its orifice quite closed by a fringed ring. *Sprekelia* of HEISTER, the old *Jacobæa Lily* of our gardens has a most singular Flower, exceedingly different from all in the Order, and it does little credit to LINNÉ's judgment, not to have admitted it. *Arviela* grows wild in the mountains of *Jamaica*,

appearing to me very different from *Amaryllis Tubispatha* of RUIZ and PAVON, which *Mr.* J. B. KER quotes for it; the Flower exhales a slight perfume of the *Tuberose,* is solitary, a little irregular from the upper Petals being more recurved, with the orifice of its Tube finely fringed; Seeds comprest and somewhat angulated, but not winged; this Genus is named after *Mr.* HENRY ARVIEL, an Englishman who resided chiefly at *Bologna,* and according to TANNER wrote on Botany so far back as 1280. *Amaryllis Atamasco* L. differs chiefly from *Arviela* in having a more funnel-shaped Corolla hardly at all irregular with a Tube quite naked at the mouth; its Seeds are also flatter and not winged, and as this beautiful Flower appears with the first warm winds of Spring, I have called it *Zephyranthes.*

Ord. 9. CYRTANTHEÆ.

Pericarpium oblongum, 3-loculare, membranaceum, ab apice 3-valve. Petala 6, coalita in Tubum sæpius longissimum et curvum, ore nunc pulvinatum; dein disjuncta in Limbum regularem præter latus superius in quibusdum magis recurvum; marcescentia sed ante fructus dehiscit decidua. Filamenta 6, infra os Tubi varie admodum inserta, nunc brevissima, decurrentia et valde prominentia. Cætera organa Fructificationis ut in *Zephyrantheis. Herbæ in Promontorio* Bonæ Spei, 8–24-*pollicares. Bulbus ovatus, Tunicis membranaceis. Stipulæ nullæ. Folia 2-faria, angusta latave, lorata, in unâ spiraliter torta, per æstatem evanida aut constanter vegeta. Flores miniati, aurantiaci carneive, rarius fragrantes. Pedunculus axillis foliorum vel nunc ad latus præcocior,* 1–20-*florus, fistulosus. Pedicelli in fructu erecti. Bracteæ* 1–2, *spathaceæ; præter nunc ramentaceas.*

Sect. 1. Corollæ Tubus fauce pulvinatus.

Vallota P. L. Petala in Tubum anguste infundibuliformem cuneis 6 pulvinatum coalita; dein recurvo-patentissima, obovata. Filamenta sub ore tubi 1 serie, vix secunda, incurvo-patentia. Stigma capitatum, 3-lobum. Herba 1½-pedalis. *Bulbus magnitudine Ovi* Anatis. *Folia* 6–8, *viridia basi badiâ, late lorata, autumno evanida. Flores saturate miniati, vix nutantes, odore levi* Opii. *Pedunculus mox post folia axillâ exteriore circa* Æquinoctium vernum, *non anceps, crassus,* 2–4-*florus. Pedicelli longissimi.* ANTOINE VALLOT, M.D. *Hortum Parisiensem in* 1665 *restauravit. Species* 1. Amaryllis Purpurea L. FIL. W.

Sect. 2. Corollæ Tubus longissimus, fauce nudus.

Cyrtanthus J. L. Petala in Tubum buccinæformem coalita; dein incurvulo-patentia, obovata, interiora parum latiora. Filamenta juxta medium tubi 1 serie, ultra os attingentia, recte dependentia. Stigma parum capitatum, 3-lobum. *Herbæ prope fluvium* Chamtours *campis gramineis,* 1½–2-*pedales. Bulbus subrotundus, magnitudine fere* Pugni. *Folia* 9–11, *glauca, parum falcato-lorata, crassa disco non depresso, coriacea, toto anno vegeta. Flores aurantiaci cum viriditate, undique cernui, inodori, Pedunculus axillâ interiore foliorum, maculis minutis aspersus, crassus, non anceps,* 9–14-*florus. Pedicelli breves. Species* 1. C. Obliquus L. FIL.

Eusipho. Petala in Tubum buccinæformem coalita; dein recurvo-patentia, semielliptica, latitudine vix inæqualia. Filamenta juxta os Tubi 1 vel 2 seriebus proximis, ultra medium limbi attingentia vel brevissima. Stigma 3-fidum laciniis angustis obtusis. *Herbæ 10–14-pollicares. Bulbus magnitudine Ovi* Columbæ. *Folia 3–6, viridia, anguste lorata, concaviuscula, autumno evanida. Flores coccinei, versus 1 latus cernui, inodori vel fragrantes. Pedunculus ad latus foliorum apud nos* Maio, Junio, *gracilis vel crassiusculus, parum anceps, 5–8-florus. Pedicelli breves vel longiusculi. ευ bene σιφων tubus curvus. Species* 2. Cyrtanthus Angustifolius L. Odorus KER *in Bot. Reg. No.* 503.

Monnella. Petala in Tubum basi angustissimum, mox anguste botuliformem coalita; dein recurvo-patula, interiora in unâ latiora. Filamenta juxta os tubi 2 seriebus proximis, ad medium limbi attingentia, vel brevissima. Stigma 3-fidum laciniis angustis obtusis. *Herbæ in* Genadendal, *prope* Uitenhage, *collibus, 12–16-pollicares. Bulbus magnitudine Ovi* Gallinæ. *Folia 3–5, glauca, anguste lorata, in unâ spiraliter torta, autumno evanida. Flores miniati vel coccinei, undique cernui, inodori. Pedunculus paulo ante folia vel simul ad latus, crassiusculus ratione foliorum, non anceps, 7–10-florus. Pedicelli inæquales.* JEAN MONNEL M.D. *floruit ad* Cambray *circa* 1650, *Botanices fautor. Species* 2. Cyrtanthus Spiralis, Collinus BURCH.

Gastronema. Petala in Tubum basi angustissimum, mox ventricosum coalita; dein recurvo-patentia, semilanceolata, interiora parum angustiora. Filamenta 3 juxta os tubi 3 multo demissius, brevissima, incurva. Stigma 3-fidum laciniis angustis emarginatis. *Herba prope fluvium* Chamtours, *10–13-pollicaris. Bulbus magnitudine Ovi* Columbæ. *Folia 2–3, glauco-viridia, anguste lorata, autumno evanida. Flos carneus Vittis 6 saturatioribus, nutans, inodorus. Pedunculus mox post folia quibus latior, apud nos post* Æquinoctium Vernum, *teres, 1-florus. Pedicellus brevis. γαστηρ venter νημα filum. Species* 1. Cyrtanthus Uniflorus KER *in Bot. Reg. No.* 168. *bona.*

Cyrtantheæ differing from *Zephyrantheæ* in their geographical position, and very materially in their more tubular floral Envelope, as well as Filaments projecting into strong ribs below their insertion, I consider them an Order; in Fruit and Seeds however those we have yet seen correspond. The affinity of *Vallota* to *Cyrtanthus* has been mentioned by the *Hon.* W. HERBERT, and appears to me unquestionable, but so far from joining them, its differences I think demand a separate Section; its Leaves are so much attenuated at the base as to appear slightly petiolated, and disappear in Autumn for several months: the Filaments are inserted below the mouth of the Tube which is bolstered above them into 6 semilanceolate Rays, terminating under the interstices of the Limb, which are transparent; and they are very slightly reclined towards the lower side; this Plant is so named in the 122nd *No.* of Paradisus Londinensis, of which only a few copies were given by *Mr.* HOOKER to his friends without any figure, after ANTOINE VALLOT M.D. a staunch supporter of the Jardin Royal at *Paris.* In *Cyrtanthus* on the contrary, the Leaves continue vegetating during the whole year, are very thick,

lorate, a little falcated, quite flat and coriaceous; its Corolla is shaped like a Cow's Horn with the inner Petals broader; Filaments inserted about the middle of the Tube, hanging down straight to beyond the mouth; its Pericarpium and Seeds never ripened, although Pollen was repeatedly applied to the Stigma, that Organ probably being never developed for want of Heat, but as my Plant continued to blossom strongly in the *Cape* House, I did not like to move it into the Stove, where *Mr.* GRIFFIN cultivates it so successfully that it has produced Seeds, which he informs me are black and flat. *Eusipho* hardly agrees in any thing with *Cyrtanthus,* except shape of Corolla, and even that has a shorter recurved Limb; its Filaments are inserted near the mouth of the Tube, very short, and a little incurved; the Flowers all hang down towards one side in both Species, appearing not long after the Leaves, which decay in Autumn. In *Monnella,* the Tube of the Corolla is shaped like a Sausage with a suddenly contracted base; Leaves glaucous, in one Species spirally twisted, seldom appearing till the flowers are past; this Genus I have named after an ancestor of the *Bouverie* Family, JEAN MONNEL M.D. who lived at *Cambray,* and was celebrated for his knowledge of Plants about two centuries back. The last Genus *Gastronema* differs widely from all the rest; its Flower is solitary, appearing a little before or with the Leaves, which are only 2 or at most 3 and narrow; Corolla whitish with 6 dull red Stripes, and an exceedingly ventricose Tube; Filaments very short, in two remote series, one close under the Limb, the other much lower, all incurved; Stigma divided into three very narrow emarginated Segments, as in several *Ensatæ.*

CLAS. 7. ENSATÆ L. KER. Irides J. R. BR.

Pericarpium fere aut totum inferum, substantiâ varium, 1–3-loculare, ab apice in valvas 3 septigeras dehiscens. Petala 6, sæpe in Tubum Modiolumve coalita, regularia vel irregularia, ocyus seriusve decidua. Nectaria 3–6, septis circa Stylum terminalia, aut Petalis varie immersa. Filamenta 3, petalis exterioribus inserta, nunc 1-delpha, in *Diplarrenâ* 1 sterile. Antheræ fere constanter erectæ vel incurvæ, 2-loculares, 4-valves, dum trifariæ extrorsum dehiscentes. Stylus 1 aut nullus. Stigma 1 aut 3. Semina plerumque numero indefinita, Septis 2-plici serie imbricata, figurâ varia; Tunica lutea badia nigrave, membranacea vel carnosa, nunc alata; Albumen corneum; Chalaza sæpe ampla; Embryo nunc brevis, Radiculâ Hilo versâ. *Herbæ aut raro Suffrutices, per totum orbem dissitæ. Radix vel Bulbus disco prioris sæpius mox interituræ quotannis nascens, vel multiceps et perennis. Folia in plurimis 2-faria, verticalia, equitantia, et ensata; cæterarum lorato-attenuata, compressa, 4-angula marginibus dilatatis planis, vel etiam teretia et fistulosa, æstate evanida aut toto anno vegeta. Flores omnium colorum, plerumque fugaces, nunc fragrantissimi, sessiles aut pedicellati, Spicâ Paniculâ Fasciculove terminali. Bracteæ* 1–2–3 *ad singulos flores, spathaceæ, marcescentes.*

A large Class, the most essential distinction of which was first noticed by ADANSON, namely 3 Stamina inserted in the outer Petals;

they have also a Pericarpium more or less inferum varying in substance, 1–3-locular, and splitting from the top into three septigerous valves; 6 Petals coalescing into a Tube or Nave, regular or irregular, sooner or later deciduous; 3 or 6 Nectaries terminating the dissepiments round the Style, or immersed in different parts of the Petals; Anthers almost constantly erect or incurved, discharging their Pollen outwardly; Style 1 or none; Stigma 1 or 3; Seeds generally numerous, with a yellow brown or black coat; Chalaza often large, Albumen horny, and Radicle turned towards the Hilum; *Root either a Bulb formed annually upon the preceding, or a perennial Stock more or less cespitose; Leaves in many 2-farious vertical and ensate, in the rest either 4-angular with broad flat margins, or simply comprest, or round and fistular, or lorate, decaying on the approach of Summer, or vegetating the whole year; Flowers of all possible colours, often splendid or gaudy, some exceedingly fragrant especially in the evening, commonly fugacious, sessile or pedicellated, in terminal Spikes Panicles or Fascicles; Bractes* 1 2 3 *to each Flower, spathaceous, marcescent.* LINNÉ inserts *Ensatæ* after his *Trinetaloideæ,* influenced no doubt by their Bractes and prevalence of the ternary number in some part or other; but I think with the whole *French* School down from TOURNEFORT, that their affinity to *Spathaceæ* is unquestionable, and the analogy of the two Orders now brought together, *Cyrtantheæ* and *Gladioleæ* is very striking, each Genus of the former having its counterpart among the latter; thus *Vallota* answers to *Lomenia, Cyrtanthus* to *Watsonia, Eusipho* to *Homoglossum, Monnella* to *Antholyza,* and *Gastronema* to *Symphydolon. Mr.* R. BROWN in his Prodromus by inverting A. L. DE JUSSIEU's series, leaves *Hæmodoreæ* most unnaturally in the middle; these I have without hesitation removed far away to the Class of *Tetræ,* on account of their yellow or red Juice, unctuous Pubescence, different Inflorescence, persistent Petals the inner in the 3-androus Genera staminigerous, and lastly their anomalous Seeds. *Mr.* J. B. GAWLER, who has now taken the name of KER, though he wrote very diffusely upon *Ensatæ* in the Annals of Botany, makes no mention there of the Melliferous Organs, or that the insertion of their Stamina is confined to the Outer Petals, nor does he say a word in any of his subsequent works about the affinity of the Class. I divide it into 6 Orders which are abundantly characterized by differences in their Foliage, Inflorescence, Petals, and Stigmata.

Ord. 1. GLADIOLEÆ.

Pericarpium coriaceum, membranaceum, cartilagineumve. Petala in Tubum fauce varie dilatatum, aut rarius in Modiolum coalita; dein in Limbum nunc resupinatum, regularem vel irregularem, et mirâ anomaliâ quandoque in eadem Spicâ, libera, in fatiscendo nunquam involuta vel convoluta, cito decidua. Nectaria varie sita. Filamenta 3, basi faucis inserta, dum irregularia plus minus oblique. Antheræ secundæ vel trifariæ. Stylus 1. Stigmata 3, simplicia vel 2-fida, absque Auriculis vel Operculo nuda. Semina sæpius numerosa, sessilia sed in multis Chorda ad Chalazam decurrens ubi cadunt

separatur et septo adhærens funiculum simulat, subrotunda vel oblonga; Tunica lutea badiave, carnosa vel membranacea, nunc alata. *Herbæ in regionibus Maris* Mediterranei *et Promontorio* Bonæ Spei. *Radix bulbosa. Folia 2-faria, sæpe verticalia et ensata, ubi equitare desinunt plus minus excisa ; in quibusdam compressa, vel conduplicata, vel 4-angula marginibus planis, vel teretia, vel plicata ; glabra vel pubescentia ; æstate evanida. Flores in Spicâ simplici paniculatâ vel corymbosâ sessiles. Bracteæ* 1–3 *sub pericarpio quarum* 2 *interiores sæpius coalitæ unam simulant.*

Sect. 1. Pericarpium membranaceun vel coriaceum. Petala in Tubum coalita, irregularia. Nectaria 3, apice Septorum circa Stylum in plerisque. Stigmata simplicia, secunda. Semina *Ballospori* et *Antholyzæ* carnosa, in cæteris alata. *Folia ensata vel 4-angula marginibus planis. Bracteæ* 3, 2 *interioribus coalitis, convolutæ, apice raro sphacelatæ.*

Symphydolon. Pericarpii Septa angusta. Petalorum Tubus angustus, variæ longitudinis, fauce oblique infundibuliformi; Limbus amplus; varie divergentia, supremum basi lateralibus contiguum, 3 inferiora sæpe maculâ ligoniformi. Filamenta sursum arcuata. Semina alata. *Herbæ in Promontorio* Bonæ Spei, 1–4-*pedales. Bulbus ovatus Tunicis reticulatis. Folia viridia glaucave, ensata, nunc angusta, lævia. Flores omnium colorum, nutantes, sæpius inodori. Spica* 3–20-*flora, secunda vel disticha. Bracteæ nunc longissimæ.* συμφυομαι *una nascor* δολων *decipiens facie* Gladioli. *Species* 20, *typus est* Gladiolus Floribundus Jacq. *quæ cum* Undulato α, β, and Milleri Ker, *Vittis petalorum* Gastronema *connectunt. Aliæ maculis ligoniformibus sunt* Cardinalis Curt. Blandus α, β, γ, δ Ker. Cuspidatus, Carneus Jacq. Angustus L. Hastatus Ker.

Gladiolus J. L. Pericarpii Septa lata. Petalorum Tubus brevis, supremum basi a lateralibus plus minus hians. *Cætera ad amussim* Symphydoli. *Herbæ a regione* Atlantis *per* Europam Australem *usque ad* Cracow, 2–3-*pedales. Bulbus subrotundus Tunicis reticulatis. Flores carnei purpureive, inodori. Bracteæ longæ. Species* 3. G. Communis P. L. Byzantinus Mill. Neglectus Schult.

Ballosporum. Pericarpii Septa angusta. Semina globosa absque alâ unde nomen; Tunica carnosa. *Cætera* Gladioli, *a quo dum floret haud dignoscas. Herba in regionibus Maris* Mediterranei *inter segetes*, 1½-*pedalis. Species* 1. Gladiolus Segetum Ker.

Ophiolyza. Petalorum Tubus brevis, fauce late et oblique infundibuliformi; Limbus amplus; supremum valde fornicatum et spatulatum, 2 lateralia maxima, 3 inferiora arcte approximata et deflexa. Filamenta sursum arcuata. *Herbæ in* Hantum, Namaquas, 7–18-*pollicares. Bulbus ovatus. Folia viridia, ensata nunc margine crasso, lævia. Flores prasini miniative, nutantes, alii vespere fragrantissimi. Bracteæ amplæ.* οφις *vipera* λυζω *singultio, a facie floris. Species* 4. Gladiolus Alatus L. Namaquensis, Viperatus Ker. Orchidiflorus Kenn.

Hyptissa. Petalorum Tubus angustus fauce oblique infundibuliformi; Limbus amplus, resupinatus; patentia, 3 superiora maculâ

ligoniformi medio parum angustiore, 3 inferiora majora et æqualia. Filamenta brevia, deorsum arcuata. *Herba prope* Zwellendum, $1\frac{1}{2}$-*pedalis. Bulbus ovatus Tunicis striatis. Folia* 4–5, *viridia, angusta, ensata, lævia. Flores pallide rosei, nutantes, in nostro horto constanter* 1-*rii, inodori. Bracteæ longæ. υπτιος resupinus. Species* 1. H. Rosea MS. *Flos siccus pulchre lilacinus.*

Ranisia. Petalorum Tubus angustus fauce valde oblique infundibuliformi; Limbus amplus; varie divergentia, supremum paulo majus, reliqua subæqualia. Filamenta sursum arcuata. *Herbæ in Promontorio* Bonæ Spei, $1\frac{1}{2}$–2-*pedales. Bulbus ovatus Tunicis parum striatis, adeo sobolifer ut in* Tristi 200 *bulbillos ad ejus basin numeraverim. Folia viridia vel glauco-viridia angusta,* 4-*angula marginibus planis lucidis, vel rarius ensata, nunc pubescentia. Flores ochroleuci lilacinive, etiam* cærulescentes, præter puncta lineolasque versicolores, nutantes, nocte fragrantissimi, in unâ per totum diem mutabiles mane sequente per plures vices pristinum colorem resumentes. Spica secunda, 1–7-flora. Bracteæ longæ. ρανις gutta. Species 15, typo Gladiolo Tristi L. Versicolor α, β, γ Ker. Concolor P. L. Trichonemifolius Ker. Recurvus L. Gracilis Jacq. Hirsutus α, β, γ, δ Ker. An his jungenda Edulis α Burchell prope Litakun detecta, cujus figurâ in Bot. Reg. No. 169.

Homoglossum. Hort. Tr. Petalorum Tubus gracilis fauce buccinæformi compressa; Limbus brevior, supremum paulo majus, suberectum, reliqua subæqualia et recurva, omnia lanceolata. Filamenta sursum arcuata. Herbæ prope Constantia, False Bay, $1\frac{1}{2}$-pedales. Bul-

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The "fair copy" of the MS. of the *Pleurothallæ* ends abruptly; it was sewed up with blank paper, most carefully squared and ruled for the remainder, which the author did not live to revise and copy.

THE END.

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